Lt Franke

Issue 95

PS

1960 Series

THE PREVENTIVE MAINTENANCE MONTHLY

SPECIAL ARTICLE

PROTECTIVE MASK PM

SEE PAGE 29

CANNIBALIZ

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You'll find that an AR now makes it legal to cannibalize end items which would otherwise go to the property disposal officer. It's AR 750-50 (6 Mar 59) and Change 1 (3 June 59) that say so.

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CHEMICAL	SB 3-38, 4 JUNE 1959
ENGINEER	SB 5-106, 3 JUNE 1959
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QM	SB 10-562, 5 JUNE 1959
SIGNAL	SB 11-478, 11 MAY 1959
TRANSPORTATION	SB 55-32, 3 NOVEMBER 1959 AR 750-1500-8, 10 APR 1957

P.S THE PREVENTIVE MAINTENANCE MONTHLY

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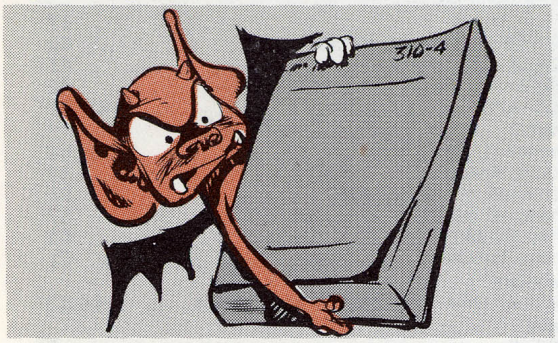
For example—

How do you find out if there's an MWO or two out on your equipment? That's the easiest . . . just leaf through your latest index, DA Pamphlet 310-4 (May 1960). Find the ones that apply to your equipment.

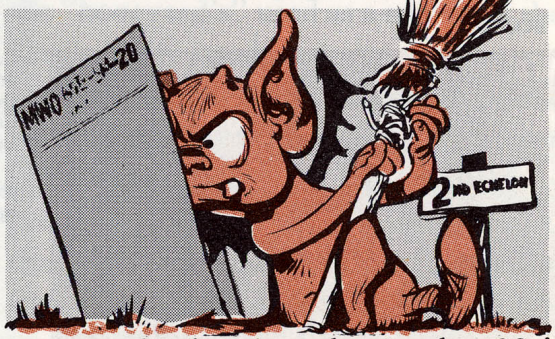


But you already know that your equipment's been modified. The joker is that you're not absolutely sure you've got every MWO on your equipment till you've checked your equipment's record jacket (DA Form 478, or it could be your Weapon Record Book, or your Missile Log Book) against the latest DA Pamphlet 310-4.

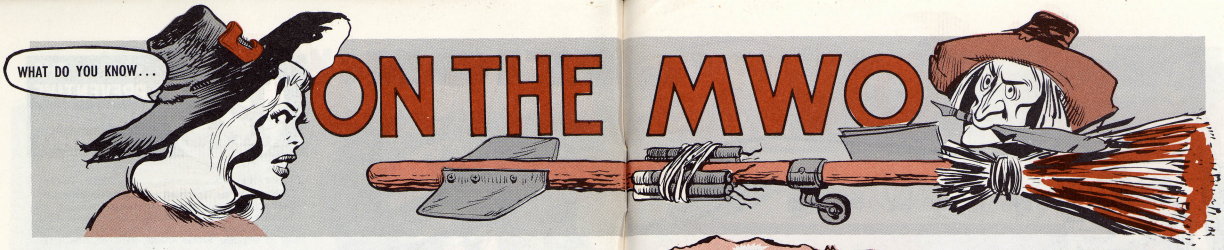
If you find any in the 310-4 not listed on your 478 as having been applied, then somebody's got work to do. But who?

It's a little hard to pin-point the echelon of the older MWO's. On most of them you've got to find the MWO and see what it says about who does it.

On the later ones, the new numbering system makes it real simple. You can tell at a glance in the index whether it's yours or not. They're numbered just like your TM's and parts manuals, with -10, -20, -30, -35 and the like. If you're



an organizational mechanic, the -20 is your meat, for example. The -30, -35 and higher numbers are for support.



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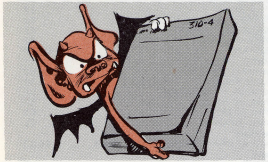

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NORMAL

MWO 9-2350-212-20/16

THE ARMY MODIFICATION WORK ORDER

OPELLED, FULL TRACKED: MULTIPLE
MM M50—INSTALLATION OF

NORMAL MWO's get applied during the regular schedule of training and operations. In other words, you don't pull your tank off a field operation to apply this type of MWO.

URGENT

MWO 9-2350-202-20/1

THE ARMY MODIFICATION WORK ORDER

D SELF-PROPELLED TWIN 40-MM

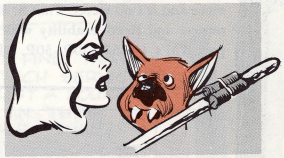
URGENT MWO's are applied soonest—or before. They're generally the kind that fix up an unsafe condition on your equipment, or prevent further damage to your equipment.

You'll also notice that there's a / followed by another number. That number is the series for your particular item. For example, -20/1 means this is the first -20 MWO on that item, the second would be -20/2, etc. The next higher echelon MWO's would be numbered -20/1, -30/2, etc.

Of course, for any MWO's you have to apply, you turn in a requisition for the parts, kits or special tools you need; the MWO is your authority to get what you need.

Then, when the parts or kits arrive, you set up a time to get the job done, the sooner the better. Let the type of MWO tell you how fast you've gotta move. There are two types—NORMAL and URGENT.

On the URGENT type, you'd get the modification on as quick as possible under whatever conditions you're operating.



OK—you've applied the MWO. What next?

Record it. Where...? On your equipment record jacket (DA Form 478). Of course, you report the MWO application, if that's required.

And then you're ready to operate.

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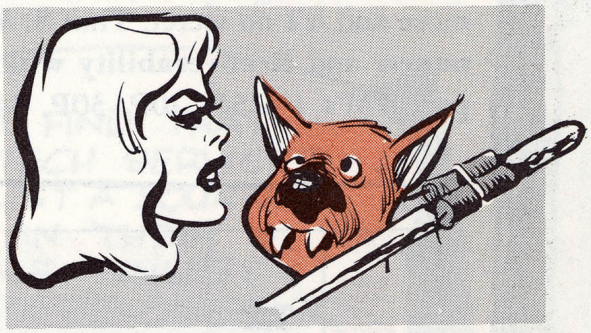

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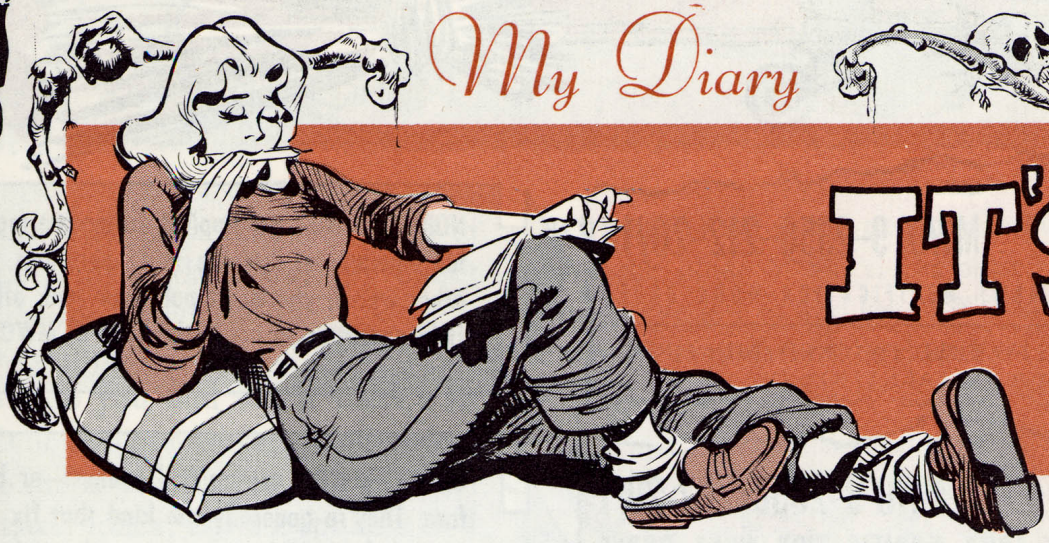


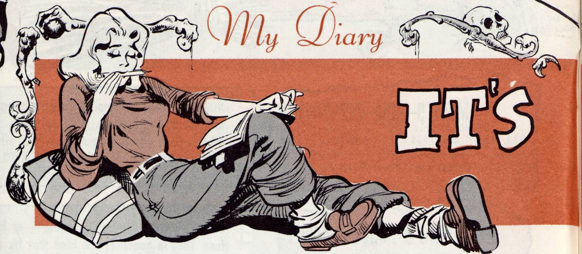
IT'S

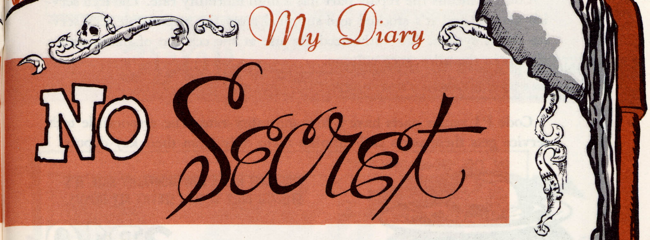
When you were a kid you probably talked pig Latin, or used letters to talk or ask questions. You had a secret code so only your buddies could figure it out. For example, you would say,

AB C D Codes? (Translated—Abie, see the codes?)
M R NO Codes (Translated—them are no codes)
SM R Codes (Translated—yes them are codes)

You may think the translation stops there. But wait! You can translate more and it's no secret. That **S**, **M**, and **R** are codes for **Source**, **Maintenance**, and **Recoverability** which you find in your "P" Parts of multi-part TM's (—15P, 20P, 30P, 34P, 35P, etc.). Here's an example:

(1) SOURCE MAINT AND RECOVERABILITY CODE	(2) FEDERAL STOCK NO	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UNIT	(6) 15-DAY ORG MAINT ALW PER 100 EQUIP		(7) ILLUST	
					CO OR ENTY (a)	DEP MAINT OR REGT (b)	FIG NO (a)	ITEM NO (b)





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					CO OR BTRY (a)	SEP CO SEP BN OR REGT (b)	FIG NO (a)	ITEM NO (b)

SOURCE CODES

The **Source** code will tell you two things. First, it will tell you which tech service is responsible for supplying the item.

If you find a 3 in the first column of your Appendix III, "Repair Parts and Special Tools List", (some tech services call the Section II "Repair Parts" or "Functional Parts List") then you'll know the item's supplied by the Chemical Corps. If there's a 5 it's supplied by Engineers, 8 by the Medics, 9 by Ordnance, 10 by Quartermaster, 11 by Signal, and 55 by Transportation.

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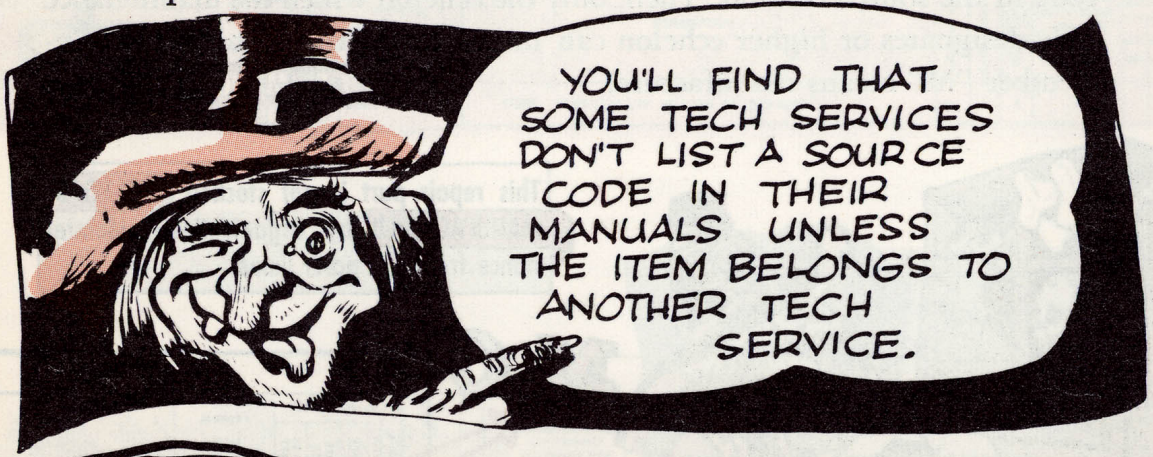

Code P means the repair part has a high mortality rate. The tech service gets it, and it's stocked and supplied from the responsible tech service depot system. It's authorized for use at the echelon of maintenance shown in the allowance column.

Code **P1** repair parts have a low mortality rate. The responsible tech service gets these parts and supplies them only from their key depots.

THIS PART HAS A LOW MORTALITY RATE. IT'S STOCKED ONLY IN TECH SERVICE KEY DEPOTS.

3P10

And this tells you that it can be put on by Organizational Maintenance.

Code M tells you the repair part is not a stocked item. It has to be manufactured and used by the echelon of maintenance shown in the source column, except, when the source code "M" is shown with a maintenance code in the source column. Then, only the echelon which the maintenance code designates or higher echelon can manufacture the repair parts. Remember "M" means manufacture.

TO BE MANUFACTURED

This repair part is not stocked. IT'S TO BE MANUFACTURED by Organizational Maintenance from the parts listed.

M O

SOURCE CODES				FEDERAL STOCK NUMBER	
TECHNICAL SERVICE	SOURCE	MAINTENANCE	RECOVERABILITY		
	M	O			STRAP, GROUND MANUFACTURE FROM:
	P	O		6145-171-3378	BRAID, WIRE (12 in. require

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M O

TM 5-4310-218-20P

SOURCE CODES: FEDERAL SERVICE	SOURCE CODES: MAINTENANCE	SOURCE CODES: RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	ILLUST FIG. NO.	ILLUST ITEM NO.
M	O			STRAP, GROUND MANUFACTURE FROM: (78365) 1PB81-2			1		27	20
	O		6145-171-2370	BRAID, WIRE (12 in. required	FT			See Group 9500,2		

TM 3-1040-206-20P

3 P O R	1040-679-6897	CONNECTION ASSEMBLY, PRESSURE FILL.	ea	.....	1	....	1.0	....	25	2
										5

THIS IS A TYPE OF REPAIR PART NORMALLY IN THE SUPPLY SYSTEM

3POR

This means the part's economically repairable so you turn in the old part to get a new one.

TM 3-1040-206-20P (OCT 59)

S, M, R code	Federal stock No.	Description	Unit of issue	Expendability	Quantity per equip.	15 Days allowance per 100 equip. 2d Echelon A	2d Echelon B		Illustrations Fig. No.	Item No.
3 P1 O	5305-021-4269	SCREW, MACHINE, flat countersunk hd, slot drive, steel, cad or zinc pltd, ¼ in.-28UNF-2A, 1 in. lg.	ea	.....	4	....	*	....	18	2

This can be ordered for immediate use but can't be stocked.

MFO BUT CAN BE INSTALLED BY ORGANIZATIONAL MAINTENANCE.

BY 3rd ECHELON

TO BE MANUFACTURED

TM 10-3950-202-20P (APRIL 59)

SOURCE MAINTENANCE & RECOVERABILITY CODE: FEDERAL SERVICE	SOURCE MAINTENANCE: MAINTENANCE	SOURCE MAINTENANCE: RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	ILLUSTRATIONS FIG. NO.	ILLUSTRATIONS ITEM NO.
	MF	O	2920-358-8333	TUBE, distributor vacuum diaphragm	ea		1	*		

If there had been an MH you would know that only 4th echelon could make the item. When there's an MD only 5th echelon can make it. The maintenance echelon symbol is no longer entered in the source column in manuals prepared by the Corps of Engineers.

TM 3-1040-206-20P

3 P O R	1040-679-6897	CONNECTION ASSEMBLY, PRESSURE FILL.	ea	------	1	----	1.0	----	25	2	5

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3 P1 O	5305-021-4269	SCREW, MACHINE, flat countersunk hd, slot drive, steel, cad or zinc pltd, ¼ in.-28UNF-2A, 1 in. lg.	ea	------	4	----	*	----	18	2

This can be ordered for immediate use but can't be stocked.

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BY 3rd ECHELON

TM 10-3950-202-20P (APRIL 59)

Source Maintenance & Recoverability Code: Technical Service	Source	Echelon	Repair Ability	Federal Stock Number	Description	Unit of Issue	Expendability	Quantity Incorporated in Unit	15 Days Organizational Maintenance Allowance Per 100 Equipments	Illustrations Fig. No.	Item No.
	MF	O		2920-358-8333	TUBE, distributor vacuum diaphragm	ea		1	*		

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TM 5-4310-218-20P

DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	ILLUST FIG. NO.	
(78365) 1F6B1-2			1		27	20
	FT			See Group 9500.2		

Code A . . . No trouble remembering this one. The **A** means assemblies. But they're not procured or stocked as assemblies. The parts are ordered by their individual stock numbers and nomenclatures and then they're put together by the echelon of maintenance shown in source column.

Code X means the item for which this part goes in or on has had it. Once this part has worn out or failed, then the item will be taken out of service. For example the M1A2 aiming post is an end item of the 318mm rocket launcher. A helical spring which is a repair part for the aiming post is source coded "X" means the aiming post will be taken out of service (not the rocket launcher).

Code Z means the end—obsolete repair parts no longer stocked or procured.

Code X1 repair parts won't be gotten or stocked. When you need one of these you order the next higher component assembly.

Code X2 repair parts won't be stocked. The echelon of maintenance shown in the Source, Maintenance and Recoverability Codes column will try to get parts through cannibalization. If they can't get them through cannibalization, then they'll requisition the parts through supply channels but there has to be a justification on the requisition.

THIS PART WON'T BE STOCKED. The echelon of maintenance shown in the Source, Maintenance and Recoverability Code column will try to get the part from salvage. If they can't get it there, they'll order it from their normal supply channels but there has to be a justification for it.

Code A . . . No trouble remembering this one. The **A** means assemblies. But they're not procured or stocked as assemblies. The parts are ordered by their individual stock numbers and nomenclatures and then they're put together by the echelon of maintenance shown in source column.

Code X means the item for which this part goes in or on has had it. Once this part has worn out or failed, then the item will be taken out of service. For example the M1A2 aiming post is an end item of the 318mm rocket launcher. A helical spring which is a repair part for the aiming post is source coded "X" means the aiming post will be taken out of service (not the rocket launcher).

Code Z means the end—obsolete repair parts no longer stocked or procured.

Code X1 repair parts won't be gotten or stocked. When you need one of these you order the next higher component assembly.

Code X2 repair parts won't be stocked. The echelon of maintenance shown in the Source, Maintenance and Recoverability Codes column will try to get parts through cannibalization. If they can't get them through cannibalization, then they'll requisition the parts through supply channels but there has to be a justification on the requisition.

THIS PART WON'T BE STOCKED. The echelon of maintenance shown in the Source, Maintenance and Recoverability Code column will try to get the part from salvage. If they can't get it there, they'll order it from their normal supply channels but there has to be a justification for it.

	A	O		SCREW, ASSEMBLED WASHER: plug in receptacle mtg	(78385) 480558			4		26	20
9			5305-013-3423	SCREW, MACHINE: plug in receptacle mtg				4	See Group 9500.1	26	19
9	P	O	5310-011-5543	WASHER, LOCK: plug in receptacle mtg	(78385) 79372			4	See Group 9500.1	26	10

A O

THIS MEANS ASSEMBLY. You order the individual parts by their FSN and then you put them together.

X

IF YOU SHOULD RUN ACROSS AN X BY A REPAIR PART YOU NEED, YOU'LL KNOW THE ITEM THIS PART BELONGS TO HAS HAD IT. ONCE THE PART FAILS, THE ITEM WILL BE OUT OF SERVICE.

Z

WHEN YOU SEE Z YOU KNOW THAT'S THE END —IT'S AN OBSOLETE REPAIR PART THAT'S NO LONGER STOCKED OR PROCURED. BUT YOU'LL USUALLY FIND A FSN OF A REPLACING OR SUPERSEDING PART.

X2 O	4310-690-1803	AIR CLEANER, INTAKE: heater
X1 O		BODY, AIR CLEANER

X1

THIS MEANS YOU CAN'T GET THE ITEM BY ITSELF. WHEN YOU NEED ONE OF THESE YOU ORDER THE NEXT HIGHER COMPONENT OR ASSEMBLY. IN THIS CASE YOU'D ORDER THE AIR CLEANER, INTAKE: HEATER.

YOU CAN'T GET THIS

SO YOU REQUISITION THIS

X2-0

TM 9-2320-208-20P

(1) SOURCE MAINT AND RECOVERABILITY CODE	(2) FEDERAL STOCK NO	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UNIT	(6) 15-DAY ORG MAINT ALW PER 100 EQUIP (a) CO OR BTRY	(6) (b) SEP CO SEP BN OR REGT	(7) ILLUST (a) FIG NO	(7) (b) ITEM NO
		GENERATOR REGULATOR						
P-0-R	2920-335-4677	REGULATOR, ENGINE GENERATOR: assy (optional w/REGULATOR 2920-335-4678) (8360020)	ea	1		1	31	1
P-0-R	2920-335-4678	REGULATOR, ENGINE GENERATOR: assy (optional w/REGULATOR 2920-335-4677) (8689216)	ea	1		1	31	1
P-0	5310-022-1177	WASHER, LOCK: split, 5/16 screw size (221177)----------	ea	4		4	31	2
P-0	2930-753-9397	GASKET: shielded electrical connector (7388352)----------	ea	5		*	31	3
P-0	5305-297-3297	SCREW, ASSEMBLED WASHER: no. 10-32NF x 11/16 (594224)----------	ea	2		*	31	4
P-0	2920-737-4922	MOUNT, RESILIENT: mounting bracket, w/STUDS, assy (7374922)----------	ea	4		*	31	5
X2-0	2920-737-4823	BRACKET: mounting (7374823)----------	ea	2		*	31	6

	A	0		SCREW, ASSEMBLED WASHER: plug in receptacle mtg	(78385) 400550			4		26	20
	C		5305-013-3423	SCREW, MACHINE: plug in receptacle mtg				4	See Group 9500.1	26	19
	B		5310-011-5543	WASHER, LOCK: plug in receptacle mtg	(78385) 79372			4	See Group 9500.1	26	10

A 0

THIS MEANS ASSEMBLY. You order the individual parts by their FSN and then you put them together.

X

X

IF YOU SHOULD RUN ACROSS AN X BY A REPAIR PART YOU NEED, YOU'LL KNOW THE ITEM THIS PART BELONGS TO HAS HAD IT. ONCE THE PART FAILS, THE ITEM WILL BE OUT OF SERVICE.

Z

Z

WHEN YOU SEE Z YOU KNOW THAT'S THE END —IT'S AN OBSOLETE REPAIR PART THAT'S NO LONGER STOCKED OR PROCURED. BUT YOU'LL USUALLY FIND A FSN OF A REPLACING OR SUPERSEDING PART.

X20 4310-690-1803 AIR CLEANER, INTAKE: heater
X10 BODY, AIR CLEANER

X1

THIS MEANS YOU CAN'T GET THE ITEM BY ITSELF. WHEN YOU NEED ONE OF THESE YOU ORDER THE NEXT HIGHER COMPONENT OR ASSEMBLY. IN THIS CASE YOU'D ORDER THE AIR CLEANER, INTAKE: HEATER.

YOU CAN'T GET THIS

SO YOU REQUISITION THIS

TM 9-2320-208-20P

(1) SOURCE MAINT AND RECOVER-ABILITY CODE	(2) FEDERAL STOCK NO	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UNIT	(6) 15-DAY ORG MAINT ALW PER 100 EQUIP CO OR BTRY (a)	(6) SEP CO SEP BN OR REGT (b)	(7) ILLUST FIG NO (a)	(7) ILLUST ITEM NO (b)
		GENERATOR REGULATOR						
P-O-R	2920-335-4677	REGULATOR, ENGINE GENERATOR: assy (optional w/REGULATOR 2920-335-4678) (8360020)	ea	1		1	31	1
P-O-R	2920-335-4678	REGULATOR, ENGINE GENERATOR: assy (optional w/REGULATOR 2920-335-4677) (8689216)	ea	1		1	31	1
P-O	5310-022-1177	WASHER, LOCK: split, 5/16 screw size (221177)	ea	4		4	31	2
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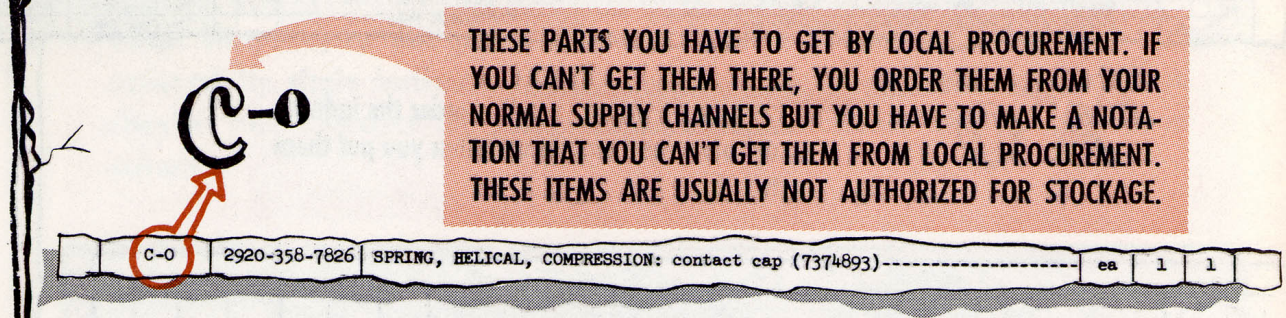
P-O	2920-737-4922	MOUNT, RESILIENT: mounting bracket, w/STUDS, assy (7374922)	ea	4		*	31	5
X2-O	2920-737-4823	BRACKET: mounting (7374823)	ea	2		*	31	6

X2-O

C-O

THESE PARTS YOU HAVE TO GET BY LOCAL PROCUREMENT. IF YOU CAN'T GET THEM THERE, YOU ORDER THEM FROM YOUR NORMAL SUPPLY CHANNELS BUT YOU HAVE TO MAKE A NOTATION THAT YOU CAN'T GET THEM FROM LOCAL PROCUREMENT. THESE ITEMS ARE USUALLY NOT AUTHORIZED FOR STOCKAGE.

	C-O	2920-358-7826	SPRING, HELICAL, COMPRESSION: contact cap (7374893)----------	ea	1	1	



Code C means you're authorized to get the repair parts by local procurement. If you can't get them there, you requisition them through normal supply channels but you have to have a statement that they're not available from local procurement.

This is what the Signal Corps manuals look like:

SIG 7 & 8 AN/GRC 19 (19 JAN 59)

SIGNAL CORPS STOCK NUMBER	FEDERAL STOCK NUMBER	REFERENCE SYMBOL	DESIGNATION BY	DESCRIPTION	QUANTITY PER EQUIP	RUNNING SPARES 1ST ECHELON	MAINTENANCE: AUTHORIZED ALLOWANCES: ORGANIZATIONAL: TACTICAL ORGANIZATION 2ND ECHELON 1-4 EQUIP	5-20 EQUIP	FIXED STATION 2ND ECHELON		STOCK GUIDE: FIELD: REPAIR SHOPS 3RD ECHELON 1-4 EQUIP	5-20 EQUIP	4TH 50 EQUIP	DEPOT REPAIR SHOP 5TH 100 EQUIP	SUPPLY: STOCK GUIDE: DEPOT: ARMY TAC 50 EQUIP	BASE 100 EQUIP	EXPENDABILITY NOTE
				AN/GRC-19 (continued)													
	5935-194-3081			JACK, TELEPHONE: for 2 cond plug; JAN type JJ-026; ea	4	-	%	%			1	1	1	2	1	10	X
	5805-503-3395			KEY TELEGRAPH KY-116/U; ea	1	1	%	%			1	1	1	1	1	4	NX

MAINTENANCE CODES

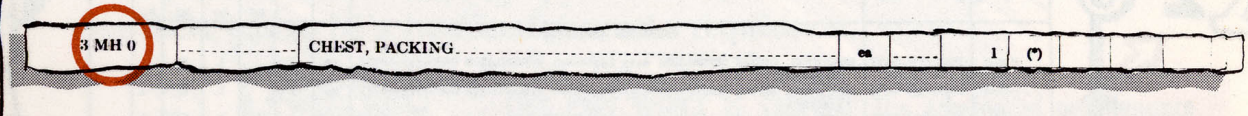
So much for Source Codes. Any questions? If not, then you should know about the maintenance code. Your maintenance code has only one letter and it will be the lowest echelon of maintenance authorized to install or manufacture the repair part. Your interest is in the **O** for organizational maintenance—1st and 2d echelon.

You'll see other letters, too. **F** is for field maintenance—3d echelon, **H** is for field maintenance—4th echelon. And **D** is for depot maintenance—5th echelon.

Now don't let a combination of source codes throw you. Here's how to figure 'em out.

Say you find a **3 MH O** in the S, M, R Code column. That means that

3 MH O	----------	CHEST, PACKING----------	ea	------	1	(*)				



it's a Chemical (3) item that is to be manufactured (M) by 4th echelon (H), even though organizational maintenance (O) can install the item.

THESE PARTS YOU HAVE TO GET BY LOCAL PROCUREMENT. IF YOU CAN'T GET THEM THERE, YOU ORDER THEM FROM YOUR NORMAL SUPPLY CHANNELS BUT YOU HAVE TO MAKE A NOTATION THAT YOU CAN'T GET THEM FROM LOCAL PROCUREMENT. THESE ITEMS ARE USUALLY NOT AUTHORIZED FOR STOCKAGE.

C-O

C-O | 2920-358-7826 | SPRING, HELICAL, COMPRESSION: contact cap (7374893)---------- | ea | 1 | 1

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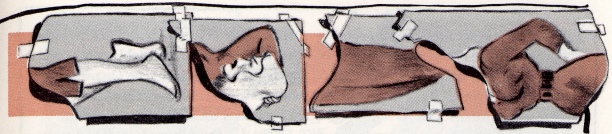


And 5 AF O (in a Chemical manual) tells you that it's Engineer (5). It's an assembly (A) that has to be put together by 3rd echelon (F), but organizational maintenance (O) can install it.

RECOVERABILITY CODES

Then you have your recoverability code which shows that it's a recoverable repair part or assembly. If you find an R you'll know that it's a part that's economically repairable. When the part's available, it'll be furnished by supply on an exchange basis. You turn in the old part and get another one in its place.

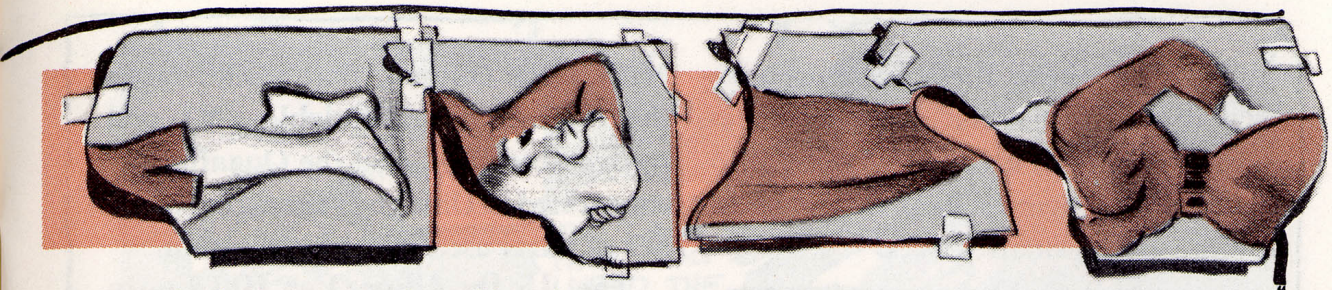
When you see an S you'll know that it's a part that can be placed in "Ready for Issue" condition by cleaning, replating, anodizing, adjusting, welding, etc.

S | 5930-735-5343 | SWITCH: ignition and fuel, assy (7355343)---------- | ea | 2 | • | • | 21 | 3

S

WHEN YOU SEE AN S YOU KNOW THAT YOU TURN THE PART IN AND IN RETURN YOU MIGHT GET A REBUILT ONE THAT SOMEBODY ELSE TURNED IN. THESE PARTS ARE PUT BACK IN SHAPE BY YOUR SUPPORT PEOPLE FOR YOUR USE.

The next column under Functional Parts List gives you the Federal Stock Number.



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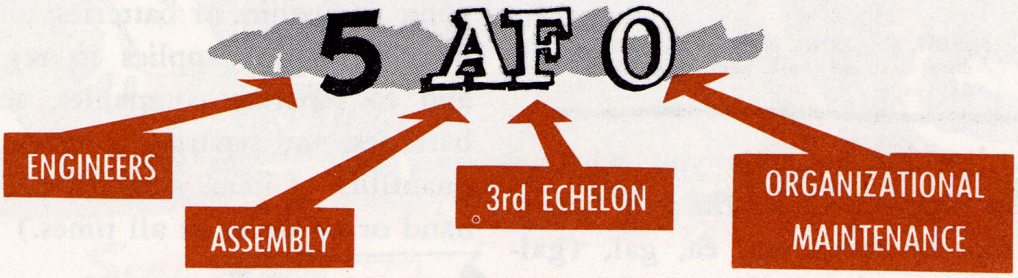

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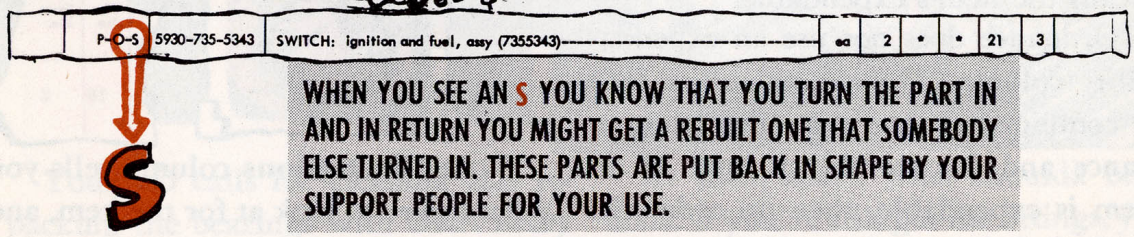

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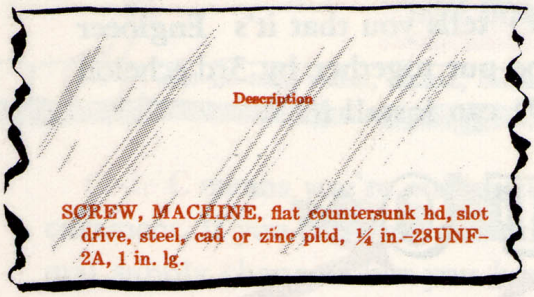
The next column under Functional Parts List gives you the Federal Stock Number.

Then you have these columns. **Description** which is the approved Federal item name in all caps. If more info is needed to identify item it will be in lower case or small letters.

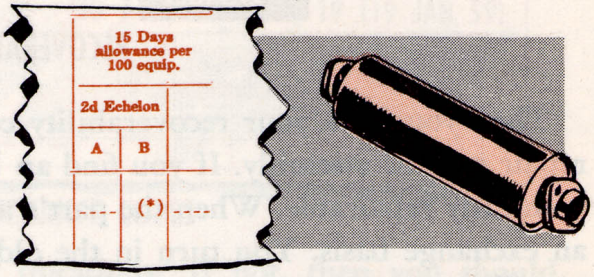


Unit of Issue tells you whether you're supposed to get the item by the ft (foot or feet), set, ea, gal, (gallon(s)), sh (sheet), lb (pounds), cntr (container), bot (bottle), etc.

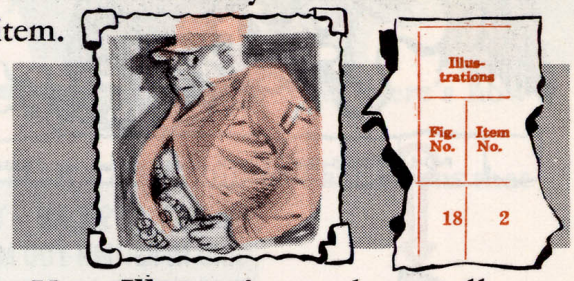
The expendability column will just have one or two letters in it—"X" means it's expendable and "NX" stands for nonexpendable. When some tech services leave the column blank that means the item's expendable.

Ordnance does not use an expendability column. The expendability info is combined with the Source, Maintenance and Recoverability info. If an item is expendable, then no code will be included. But if an item's nonexpendable, it'll have an N combined with the Recoverability Code. For example if an item has an NR in the S, M, R Code column, that would mean the item is nonexpendable (N) and recoverable (R). And the Quantity Incorporated in Unit gives the actual number of parts used in the application.

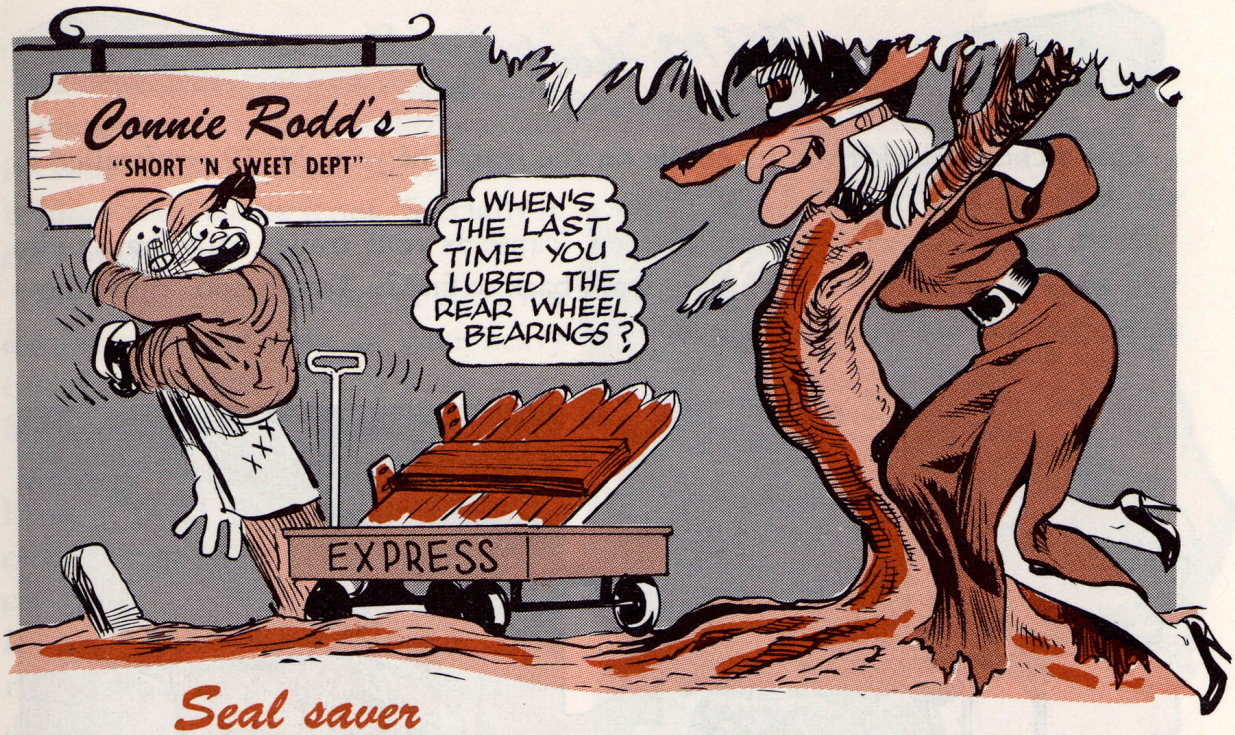
The **15 Da Allow. Per 100 Equip.** (Chemical Corps and some of the Ordnance Corps manuals break this down into Column A, which applies to organic companies or batteries; and Column B, which applies to regiments and to separate companies, separate batteries, and separate battalions. The quantities of items shown must be on hand or on order at all times.)



When you see an asterisk (*) in the allowance column, you'll know that you can requisition the item if you need it but you can't order it just to have an extra one on hand in case you need it. In other words you don't stock this item.



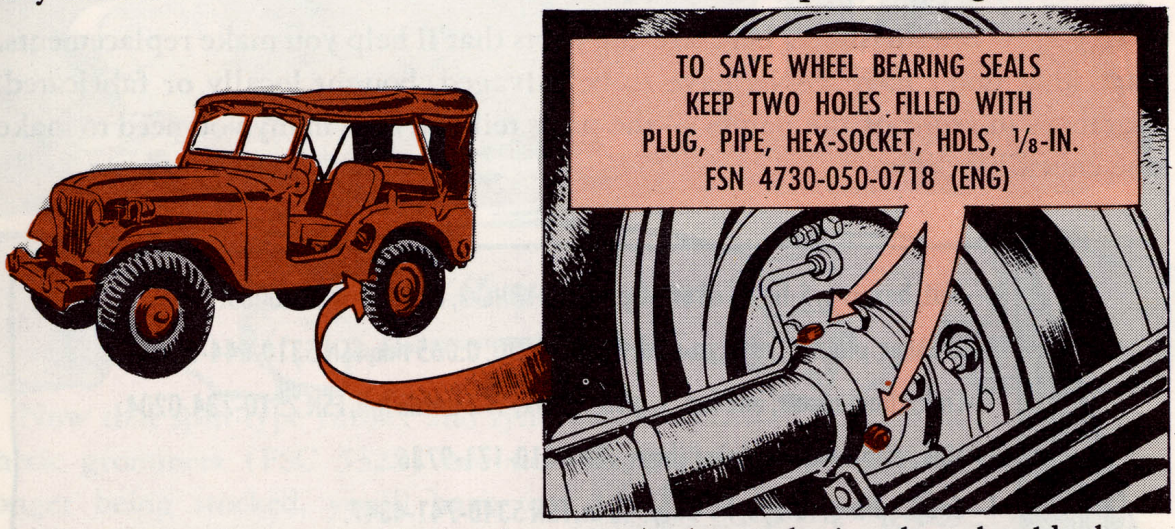
Your **Illustrations** column tells you what figure to look at for the item, and the **Item No.** tells you what number you look at after you turn to the figure and the schematic reference symbol on electronic equipment.



Seal saver

Just because there're no lube fittings on the rear axles of your M38 and M38A1 Jeeps, there's no reason to pass up lubing rear wheel bearings...when they need it.

MWO Ord G1-W43 (12 Jan 54) that's now rescinded. It put in pipe plugs to make sure those fittings wouldn't get hit with a grease gun every time the vehicle was up for lubing.



Your LO calls for cleaning and repacking the bearings with GAA every 12,000 miles or annually. You'll need to dis-assemble 'em to do the lube job and to make sure that no grease is on the brake linings.

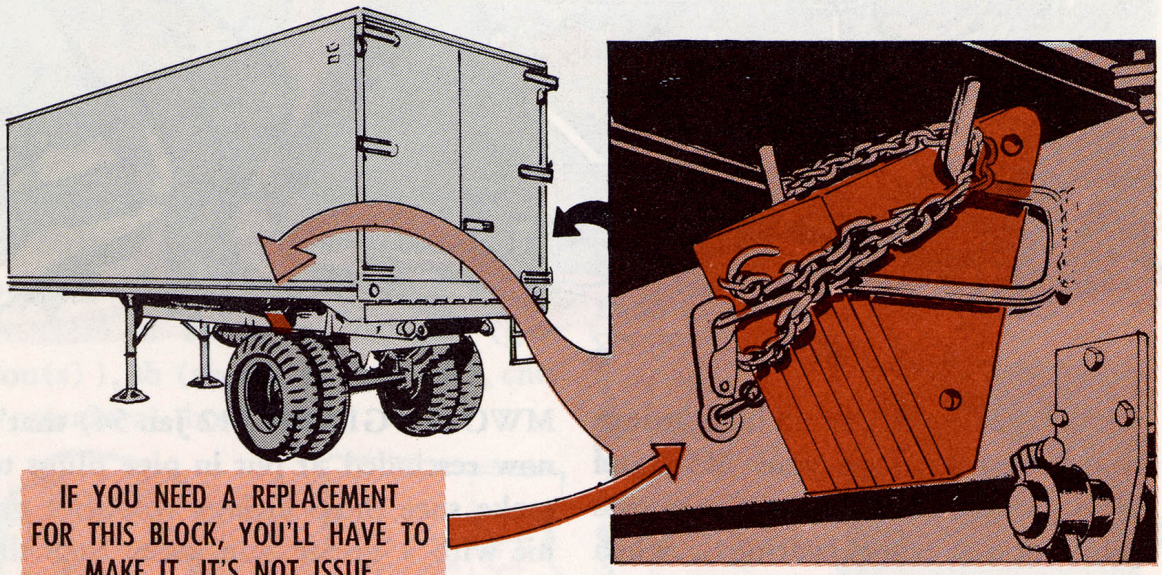
Those lube fittings got replaced by

At least, that's what shoulda been done. If you've still got the fittings, you can avoid over-lubing and damage to the wheel bearing seals by keeping those two holes filled with Plug, pipe, hex-socket, hdls, 1/8-in FSN 4730-050-0718 (ENG).

M119 chock blocks

Lost a chock block from its cradle on the frame of your M119 semitrailer so you can't chock it?

'Tain't easy to lose. But it can happen, 'cause as your trailer rolls that cradle will rock. And once lost, it's a long walk back to find it. Tough, too, 'cause these assemblies are not stocked for issue.



IF YOU NEED A REPLACEMENT FOR THIS BLOCK, YOU'LL HAVE TO MAKE IT. IT'S NOT ISSUE.

If you're caught short, here are the parts that'll help you make replacements. Parts that don't have FSN's have to be salvaged, bought locally or fabricated. Numbers in front of the names o' the parts tell you how many you need to make one chock block:

4—Nut, hex, reg, S-fin, S, cd or zn-pltd, 5/16-18NC-2, FSN 5310-022-0065.

4—Washer, plain, S, cd or zn-pltd, 3/8 ID, 3/4 OD, 0.065 thk, FSN 5310-044-6548.

1—Link, chain repair, end lap, S, glvd, 7/32 stk, 1 1/4 inside lgh, FSN 2510-734-0204.

1—Link, attaching, retaining chain, FSN 4010-171-9736.

1—Snap, spring, rd-eye, hv-duty, 5/8 in, FSN 5340-741-4347.

4—Chock block bolt, carriage, rd-hd, sq-nk, S, 5/16-18NC-2x9 1/2.

1—Chain, welded, proof coil, closed stght link, WI or open hearth, S, glvd, nom size (15 1/4 links per ft) (83 links lg).

7—Wood sections, fabricated from 2x10 hardwood. Use old block as a template—or measure inside dimensions of chock block cradle welded to the trailer frame.

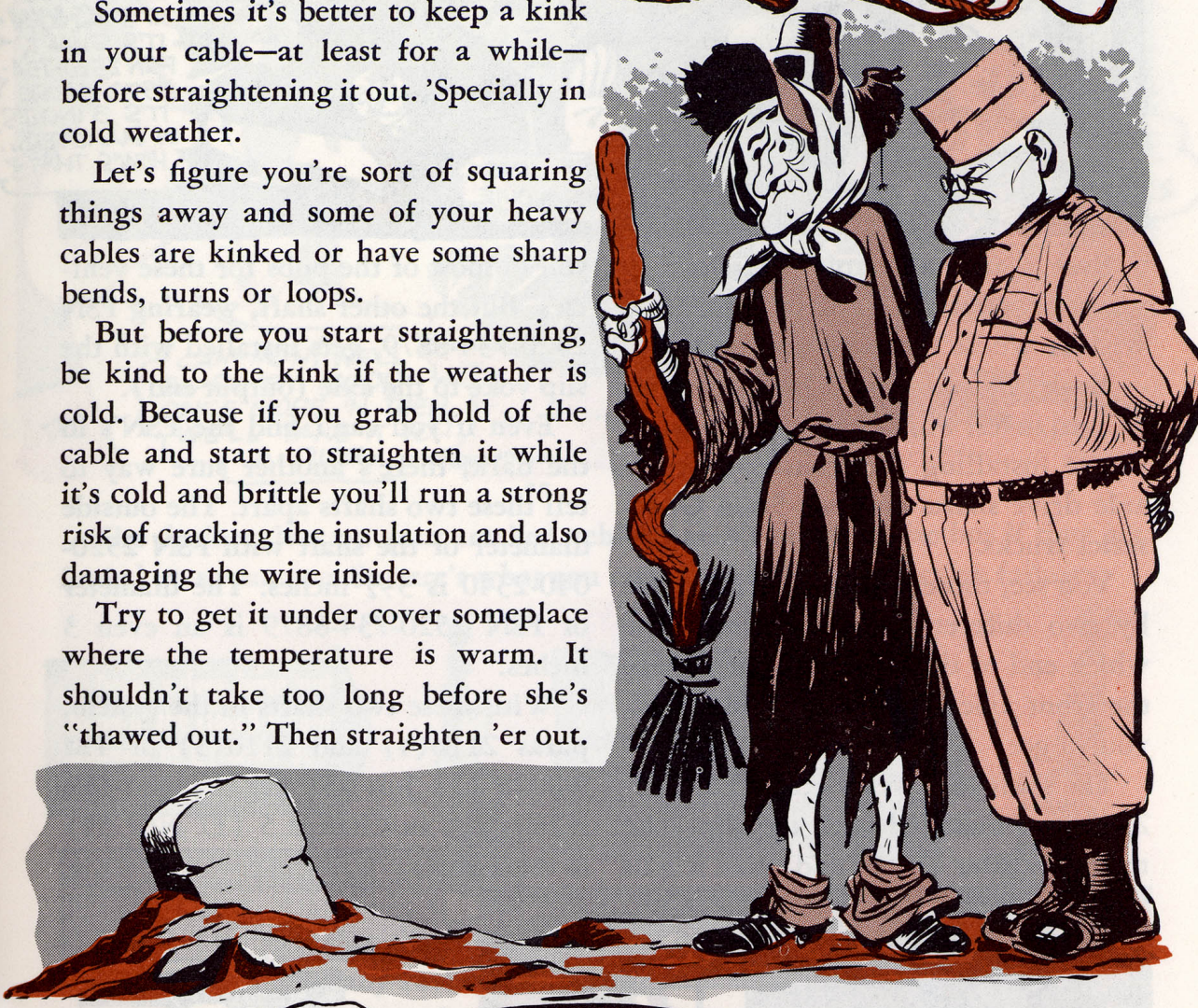
Cold cable kink cure

Sometimes it's better to keep a kink in your cable—at least for a while—before straightening it out. 'Specially in cold weather.

Let's figure you're sort of squaring things away and some of your heavy cables are kinked or have some sharp bends, turns or loops.

But before you start straightening, be kind to the kink if the weather is cold. Because if you grab hold of the cable and start to straighten it while it's cold and brittle you'll run a strong risk of cracking the insulation and also damaging the wire inside.

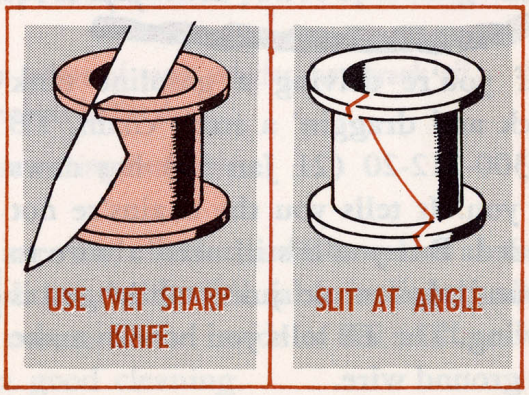
Try to get it under cover someplace where the temperature is warm. It shouldn't take too long before she's "thawed out." Then straighten 'er out.



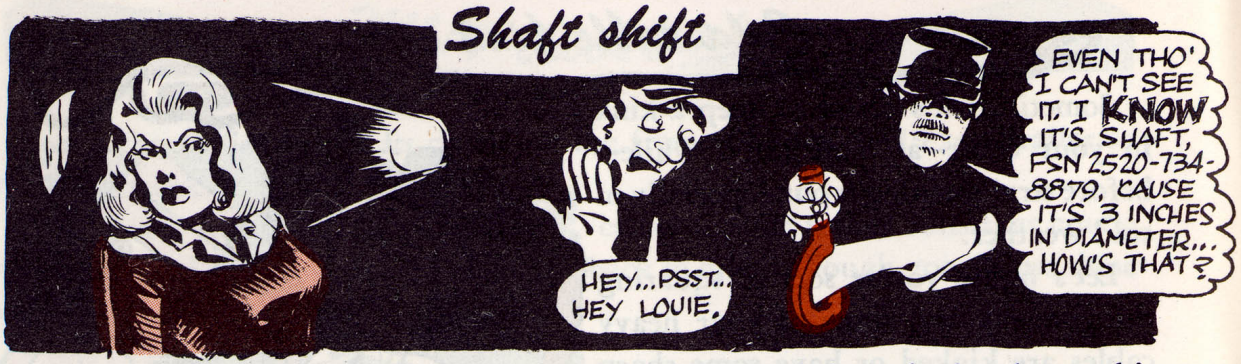
Split your own

Now that split-type rubber and synthetic grommets (FSC 5325) are no longer being stocked, you'll have to perform a do-it-yourself job when you have to replace old ones.

Just use a wet, sharp knife and slit the new grommet at a 30-, 45- or 60-degree angle. The 45-degree angle is the most common. But cut yours to match the one you're replacing.



Shaft shift



Ever watch a coupla wrestlers all wrapped up in their little game and wonder whose foot's getting twisted?

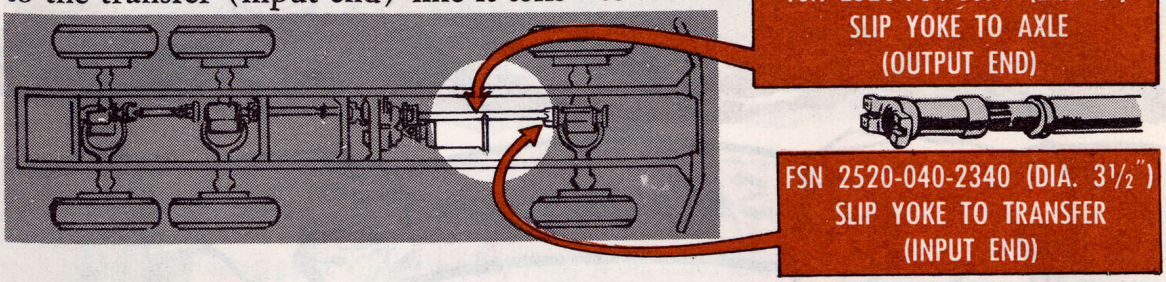
Yeah . . . well you may find it just as hard to tell which end is which when you're installing the transfer-to-front-axle drive shafts on your 5-ton G744-series trucks.

You see, those shafts are being made by two different manufacturers. And which end of the shaft you put toward the front axle depends on whose shaft you've got.

The shaft that wears FSN 2520-040-2340 gets installed with the slip yoke to the transfer (input end) like it tells you in most of the pubs for these vehicles. But the other shaft, wearing FSN 2520-734-8879, gets installed with the slip yoke to the axle (output end).

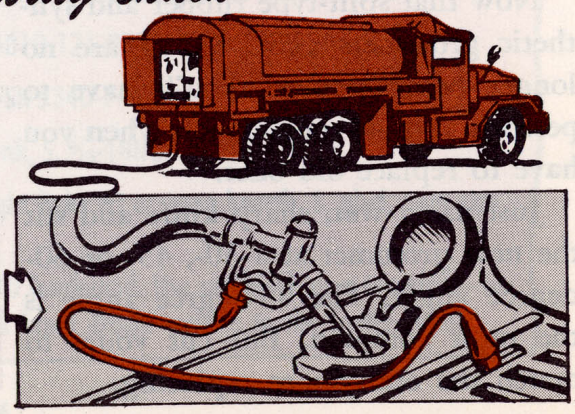
Even if you can't find the FSN's in the dark, there's another sure way to tell these two shafts apart. The outside diameter of the shaft with FSN 2520-040-2340 is 3½ inches. The diameter of FSN 2520-734-8879 is an even 3 inches.

With these two shafts in the system, paras 211b(4) and 211d(5) of TM 9-8028 (13 Jun 55) get changed like it tells you in Change 5 (17 Nov 59) to the TM.

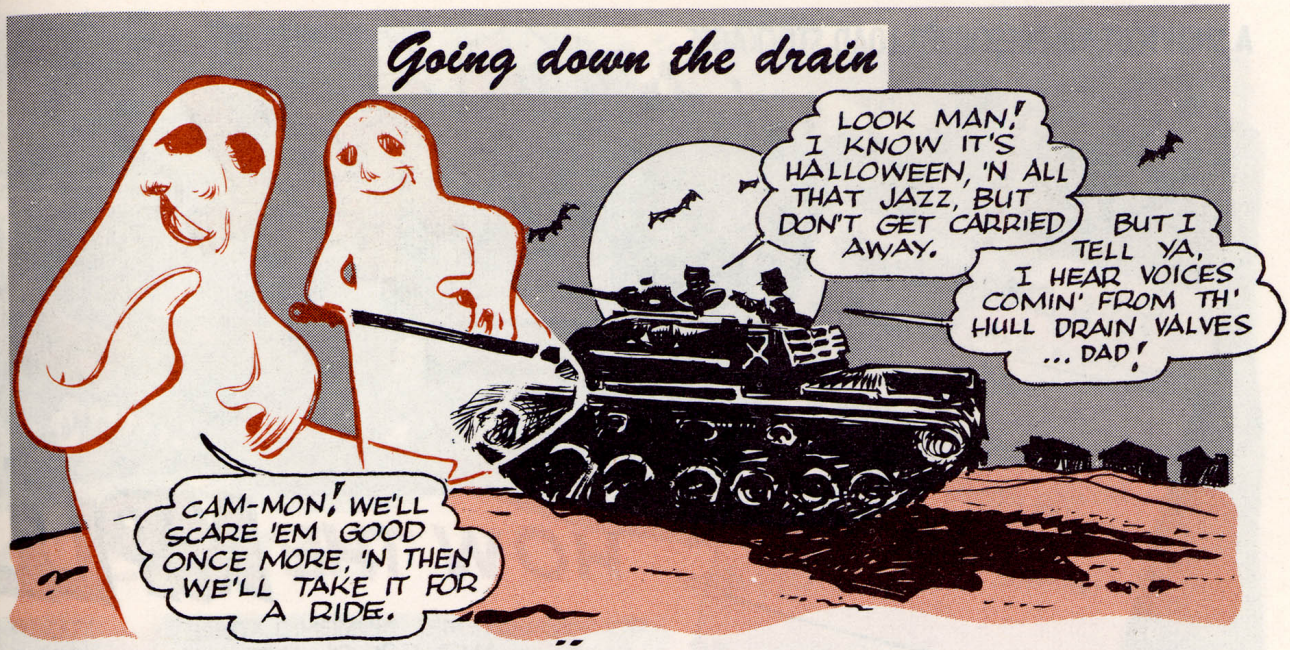


Dropped drag chain

If you're driving a gasoline tank truck and draggin' a static chain, TB 9-2300-212-20 (21 Jan 59) has news for you. It tells you the chains're not needed. But you'll still need a wire to ground that static juice while gas is flowing. The TB tells you how to make the ground wire.



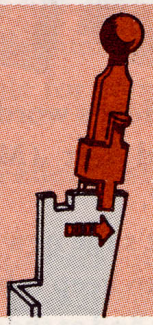
Going down the drain



The drain valves on your tracked vehicles aren't much in size but if they get fouled up so can you. So here's what you can do to avoid drain valve failures:

Drain valves have got to be in the closed detent position at all times during operation.

In the "after operations" check or after "operations under unusual conditions," open the valves to let any accumulation of water drain from the hull.



Before you park for the night the valves have got to be left open to drain off any rain or snow or any fuel or oil that might leak during the night.

In cold weather, trapped water can freeze around the control linkage and give you a hard time trying to control your vehicle. Any time a lot of water on the hull floor could cause damage to the electrical wiring and short or ground out the circuits.

Here's why the drain valves must be kept closed when you're operating:

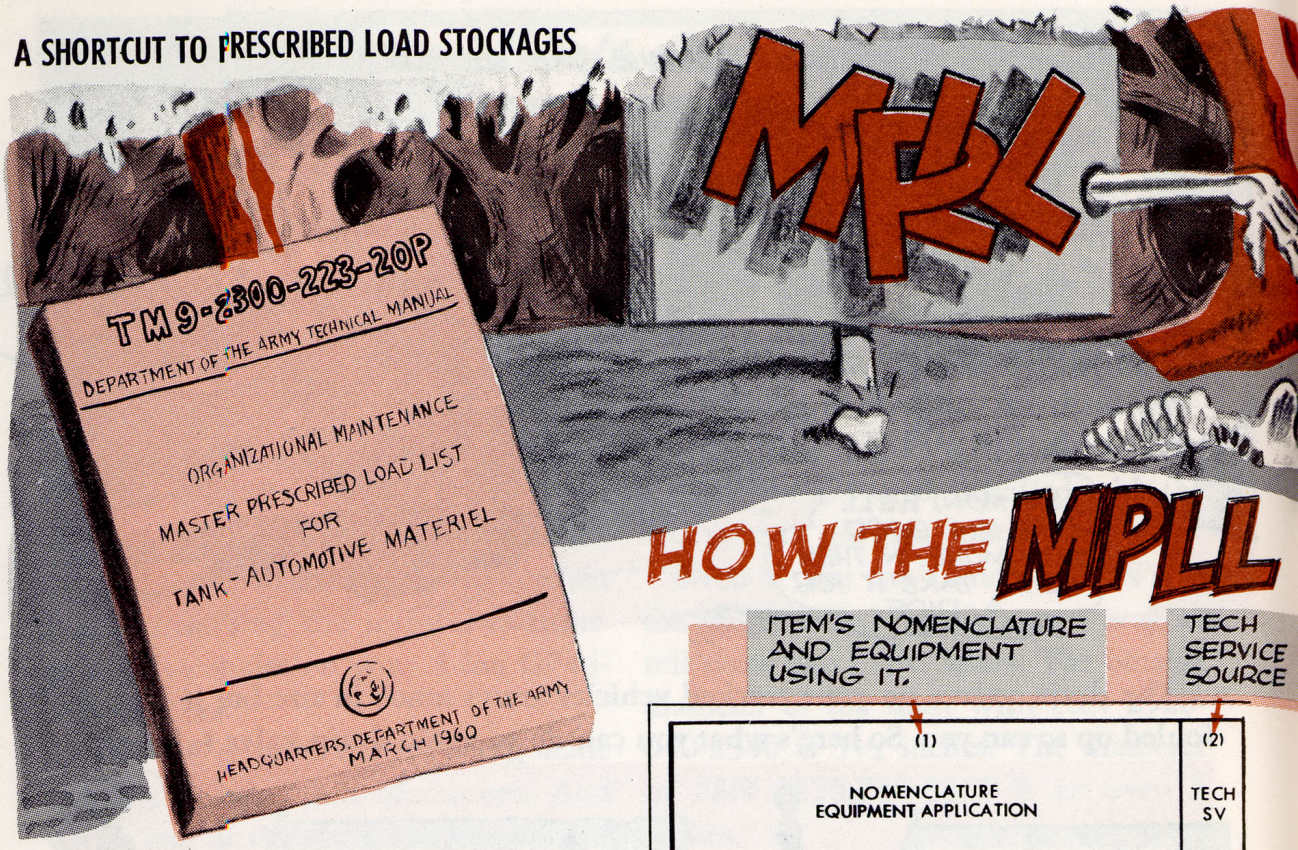
1. In cross-country operation, plugs on the drain valves of some vehicles may break off. On other vehicles, mud or water may enter when the vehicle bellies down.

2. Mud and gook can pack around open drain valves making them useless.

So it might be a darn good idea to be sure and check the drain valves at every Q service to see they're working right and that the flexible cable is slightly oiled.

When you've got the power package out, give the inside of the hull and all the draining mechanisms and linkages a good cleaning.

A SHORTCUT TO PRESCRIBED LOAD STOCKAGES



Here's word on the Master Prescribed Load List (MPLL)—TM 9-2300-223-20P.

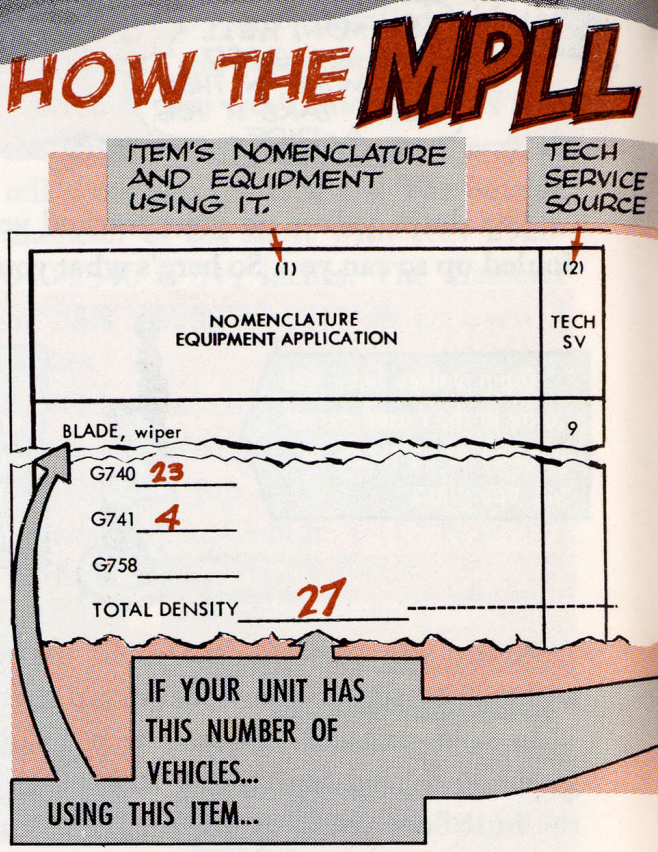
It's the new and easy method for outfits to keep tab on their official stockage lists and at the same time cut paperwork, manhours and headaches. It pops with snappy right answers when you need 'em.

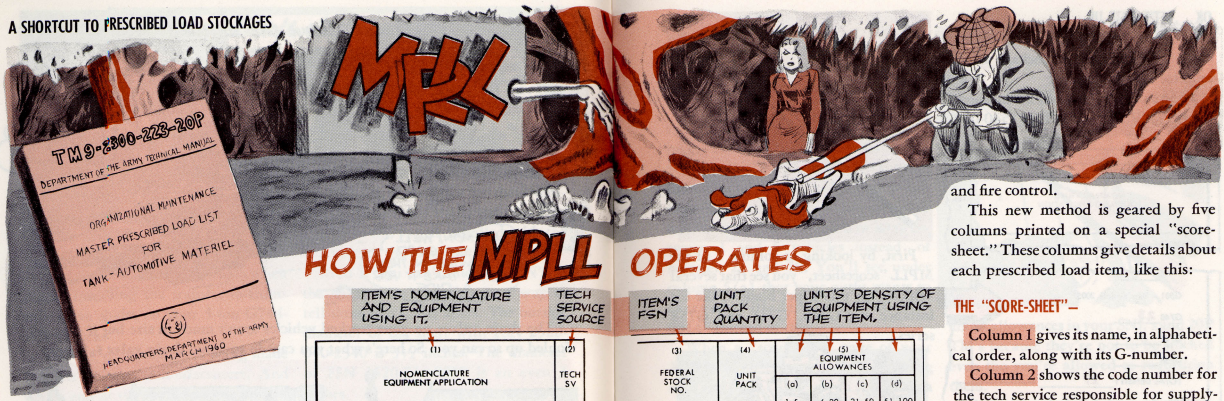
IT'S A TM—

Presented in TM garb, the MPLL cuts stockage bookkeeping and digging for details and then gives you needed info about prescribed load items. That is, items that you must have on your supply room shelf . . . items whose failure would deadline equipment, cause a safety hazard or jam the getup and go of an outfit.

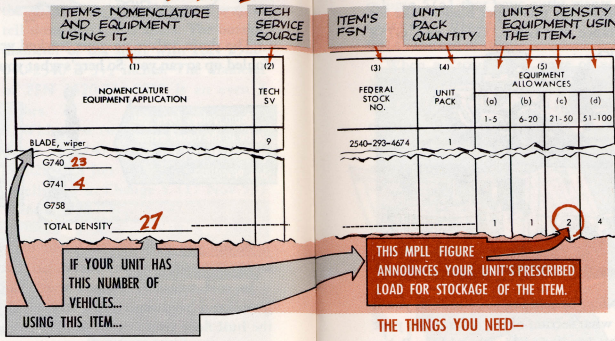
It lists parts like carburetors, spark plugs, generators, fuel pumps, fuel lines, mounting gaskets, and the like.

But the MPLL's not used for OK'd replacement items—the kind not figured urgent enough to actually stop a movement. These would be parts such as hoods, bumper, mirror arms, weatherstrippings, door handles and other parts which can be gotten as needed. It doesn't include items whose failure rate can be predicted, such as brakeshoes and oil filter elements.





HOW THE MPLL OPERATES



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THE THINGS YOU NEED—

With a little help, the MPLL with its six sections gives out with immediate needed info about the minimum number of prescribed load repair parts which must be kept in stock or on order to support a known number of vehicles, at organization level, for a 15-day period.

One section names related SNL's by title, organization and date.

The other is divided into three sections . . . Tank-automotive, armament and fire control.

This new method is geared by five columns printed on a special "score-sheet." These columns give details about each prescribed load item, like this:

THE "SCORE-SHEET"—

Column 1 gives its name, in alphabetical order, along with its G-number.

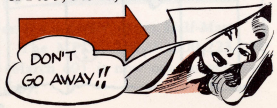
Column 2 shows the code number for the tech service responsible for supplying it.

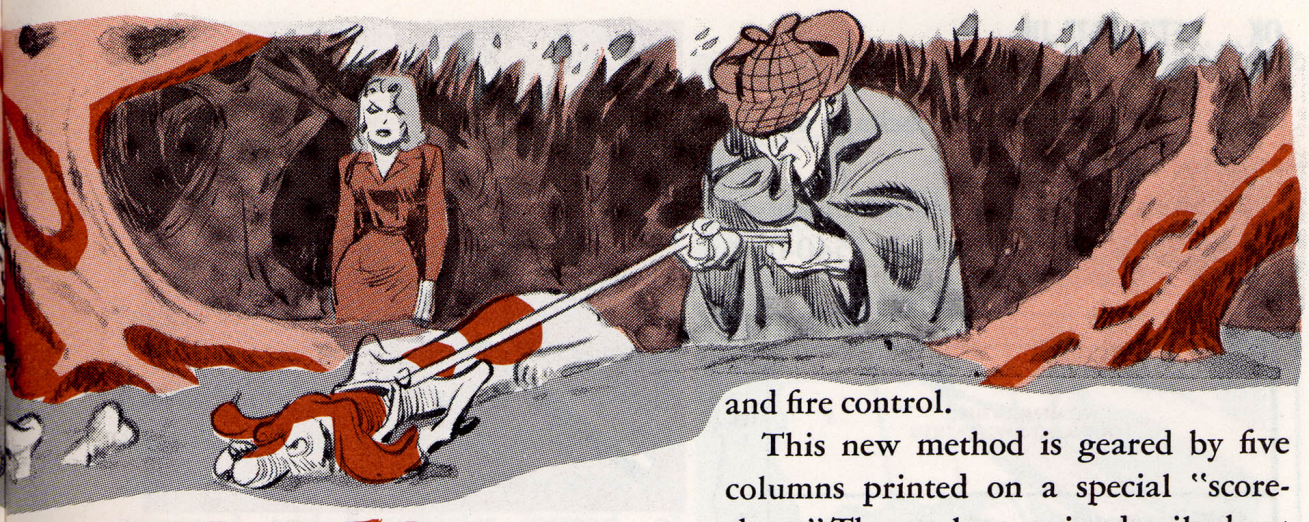
Column 3 gives its Federal stock number.

Column 4 shows its unit pack quantity. Outfits can stock up to that figure.

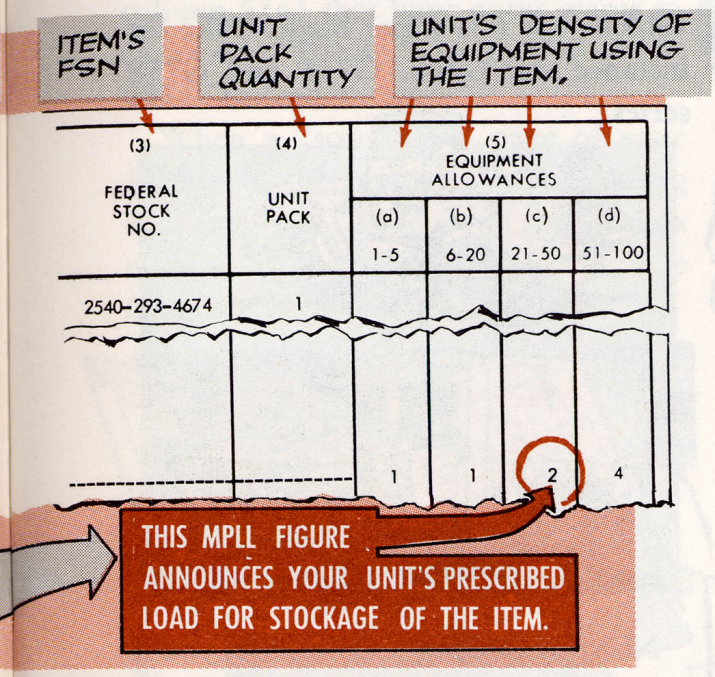
Column 5 you'll notice, is split into four sections. Figures in these sections show the item's OK'd unit maintenance allowance according to vehicle densities. These figures tell you the minimum number of items needed in stock to support the number of items needed in stock to support the number of vehicles you have.

The four divisions of column 5 are a, b, c and d for the four density groups of 1 to 5, 6 to 20, 21 to 50 and 51 to 100.





OPERATES



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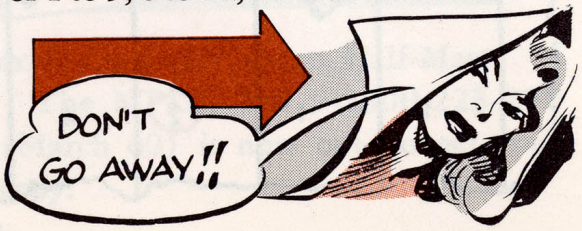
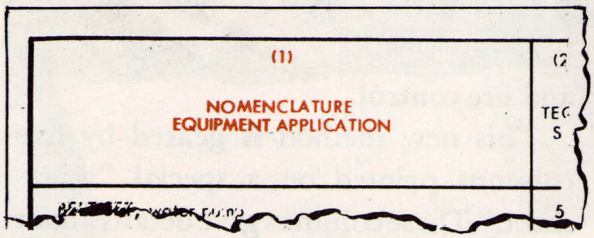
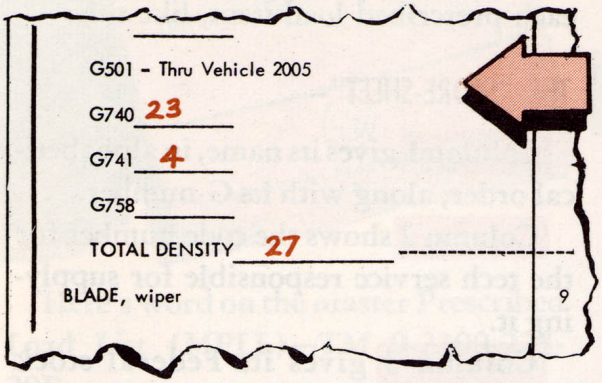


OK . . . LET'S TOTE UP—

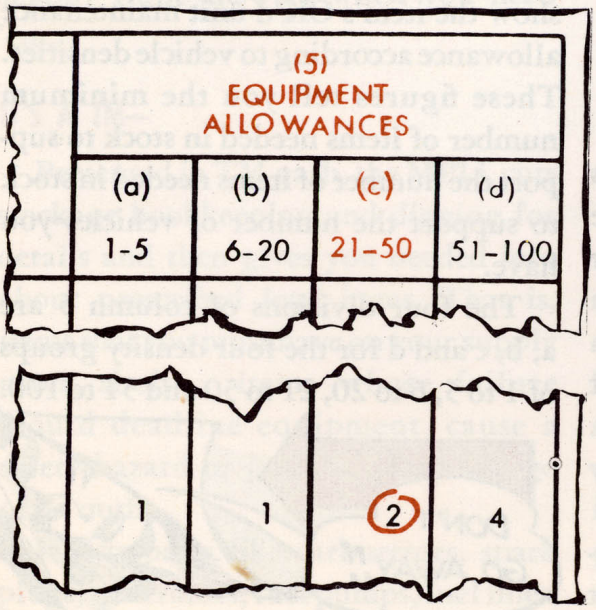
With the MPLL, here's how to find out what the minimum stockage allowance for an item will be:

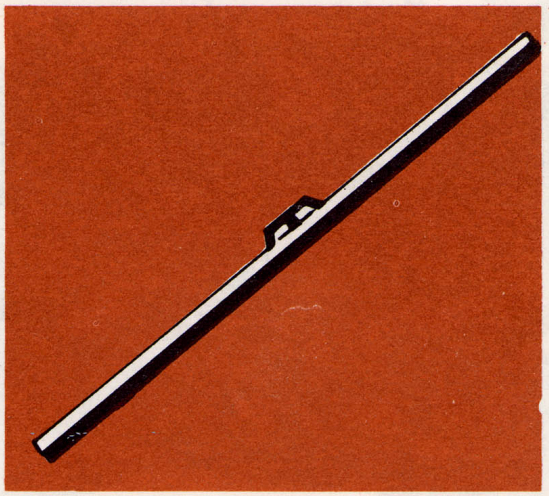
As an example, let's take a windshield wiper . . . "Blade, wiper, FSN 2540-050-0814."



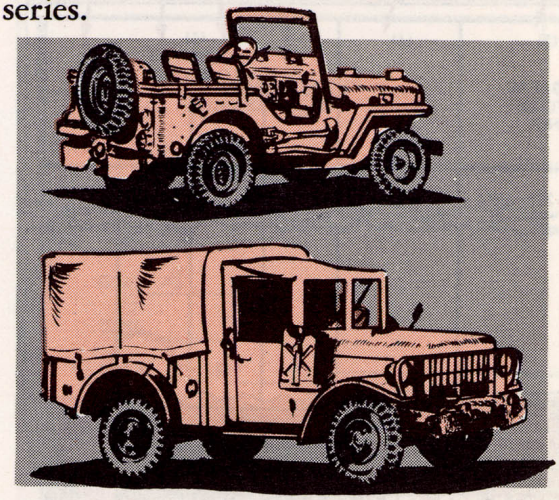


Next, let's say your outfit happens to have 23 G740's (M38 Jeeps) and 4 G741's (¾-ton trucks). With those vehicles on hand, you know your outfit's density for that item is 23 plus 4 or 27.





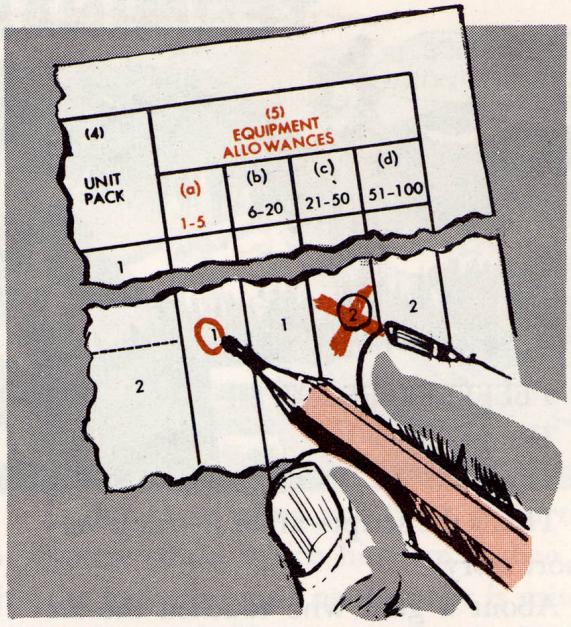
First, by looking at column 1 of the MPLL "scoresheet," you see that several vehicles use this wiper blade. Take for instance the G740, G741 and G758 series.



Now, by looking at column 5, you'll see what section of the column fits your unit's density for this wiper blade. Being 27, you glance at column 5(c) because that's the section for from 21 to 50 vehicles. In that section 5(c) you'll find the figure "2." Circle it because it applies to your present density.

That "2" in column 5(c) of the MPLL 'scoresheet" means your outfit will carry in stock two "Blade, wiper, FSN 2540-050-0814" to support your outfit's 27 vehicles.

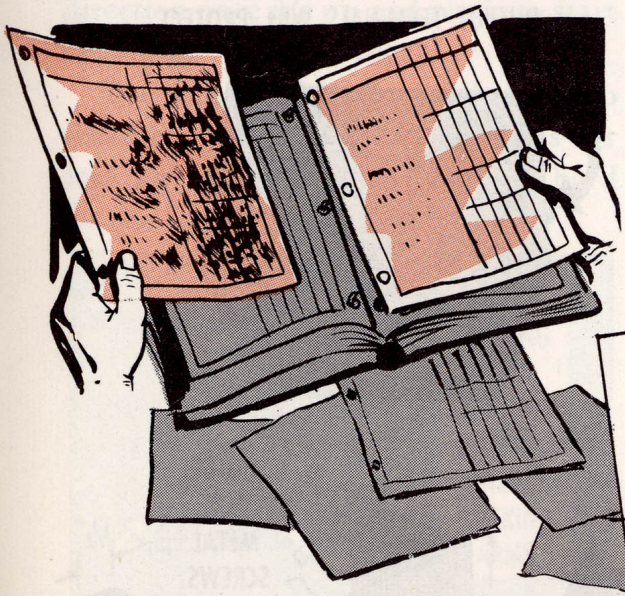
WOOPS . . . A CHANGE—



While we're supposing, let's see what happens when changes are made.

Say your outfit's 23 Jeeps have been turned over to another outfit. As a result, your outfit's density is less. Since you now have only four vehicles that use the wiper blade, you recheck your density rating under column 5(a) instead of column 5(c) because you now have between 1 and 5 vehicles instead of between 21 and 50. You'll see under column 5(a) that your outfit wants to carry one "Blade, wiper, 2540-050-0814" instead of two.

When a "scoresheet" page of your MPLL can no longer be used for making neat and plain changes, you just put in a new sheet with the same items. The page form is known as TAC Form 234F.



The new MPLL will be helpful to every supply and maintenance man. With it, you can easily handle such changes as densities, additions, codes and cuts as they take place . . . and with very little effort. Besides, you can forget about allowances in your SNL's and 20P TM's because they're not to be stocked even tho you're allowed to requisition them.

One more helpful hint about the MPLL—it's a good idea to have a file of current supply and tech manuals handy for ordering parts not listed in the MPLL.

Some of you supply men may have ideas or comments about the MPLL. If you do, fire them off to:

Commanding General
U. S. Army Tank-Automotive Command
28251 Van Dyke Avenue
Center Line, Michigan
ATTN: ORDMC-FMT

or, if you prefer, to Sgt. Half-Mast.

The MPLL, TM 9-2300-223-20P (March 60) is now out—so get your copy.

TERMINAL STORY

YEEEEEEEEEEOW! ! !

Thud.

The End.

That's the script—all of it—for a very short story.

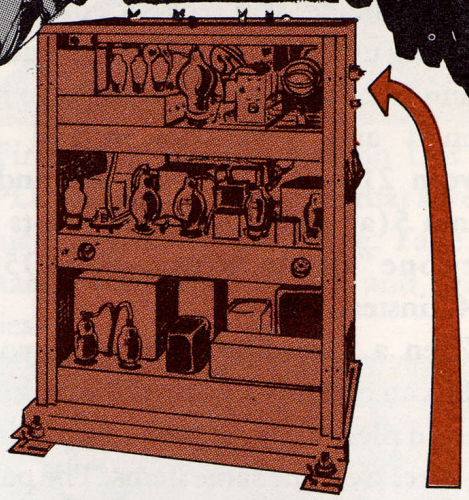
About a gent who touched the antenna terminals on his fixed BC-610-( ) radio transmitter. 'Cause there's enough RF voltage perched on those terminals to jolt a man almost from here to boot hill.

And when your BC-610 stands in a fixed position there's nothing in the world to prevent a man some time from accidentally making contact with those terminals. Nothing in the world, that is, except a simple shield that will be a lot less dangerous to bump into than the terminals.

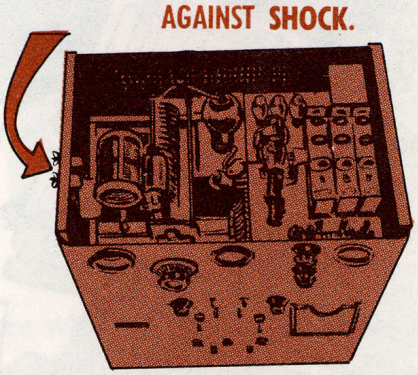
That shield is made of thin metal and secured to the side of the transmitter by four metal screws. If no metal is handy, just about any material that's rigid enough to resist a bump or three will give the story a happy ending.

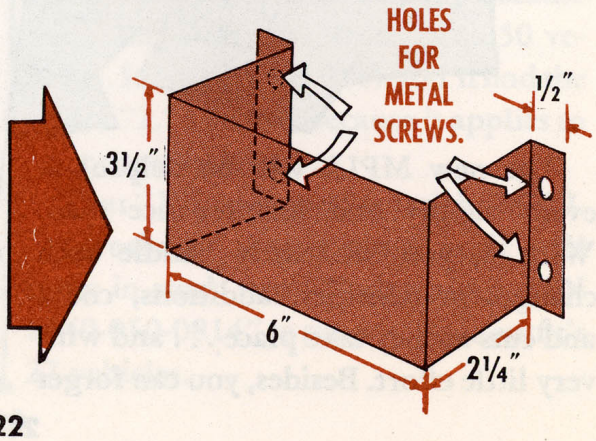
Generally speaking, though, the shield should be about six inches long, at least 2¼ inches "deep" and 3½ inches high. Attach the whole works to the side of the transmitter so the two antenna terminals are centered.

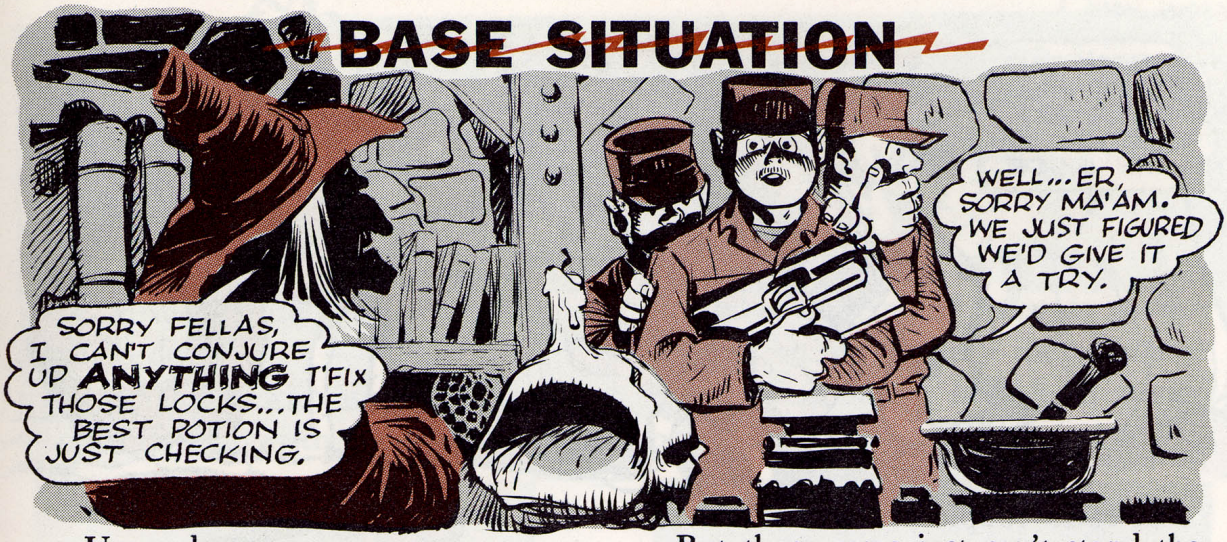
The end.



THE SHIELD OVER THESE RF OUTPUT TERMINALS WILL PROTECT AGAINST SHOCK.







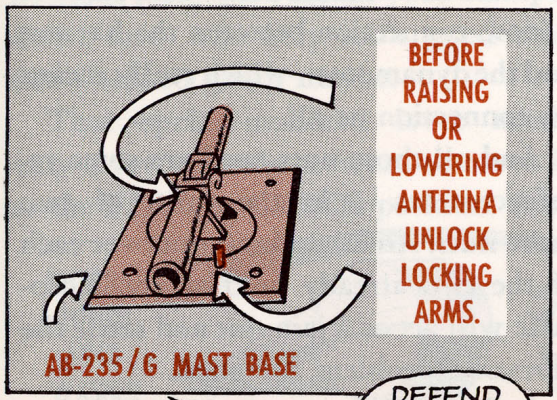
Up or down.

Whichever way your antenna is going, the important thing is to keep it **unlocked** during the process.

Which antenna? The OA-482/TRC —used with the AN/TRC-24.

These antennas have a locking device on the AB-235/G mast base which keeps the antenna pointing in the right direction once it's up and ready to start beaming.

The actual locking is handled by two small but powerful mast base locks—or locking arms—that clamp down hard on the swivel of the base. Fine.



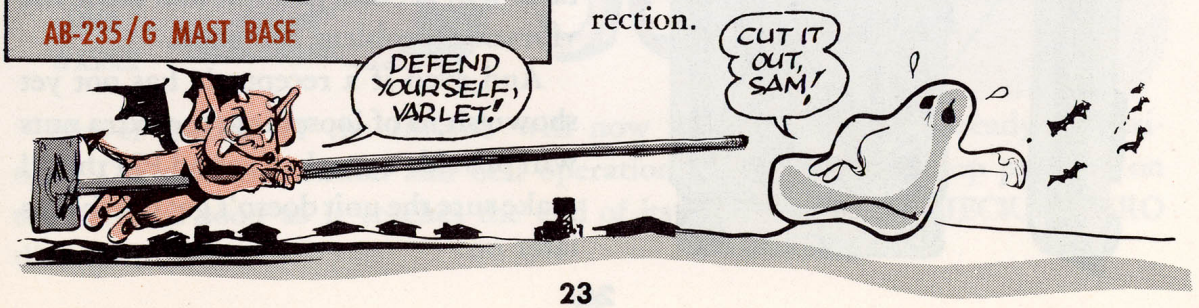
But those arms just can't stand the severe strain which hits 'em (when in the lock position) as the mast is raised or lowered. They snap. Break. When that happens, your mast base becomes just so much cold metal.

What now! Why not reach in the bin for two more locks, the man says. But hold everything. That just can't be done. There simply is no breakdown of parts for the AB-235/G mast base. It's all or nothing.

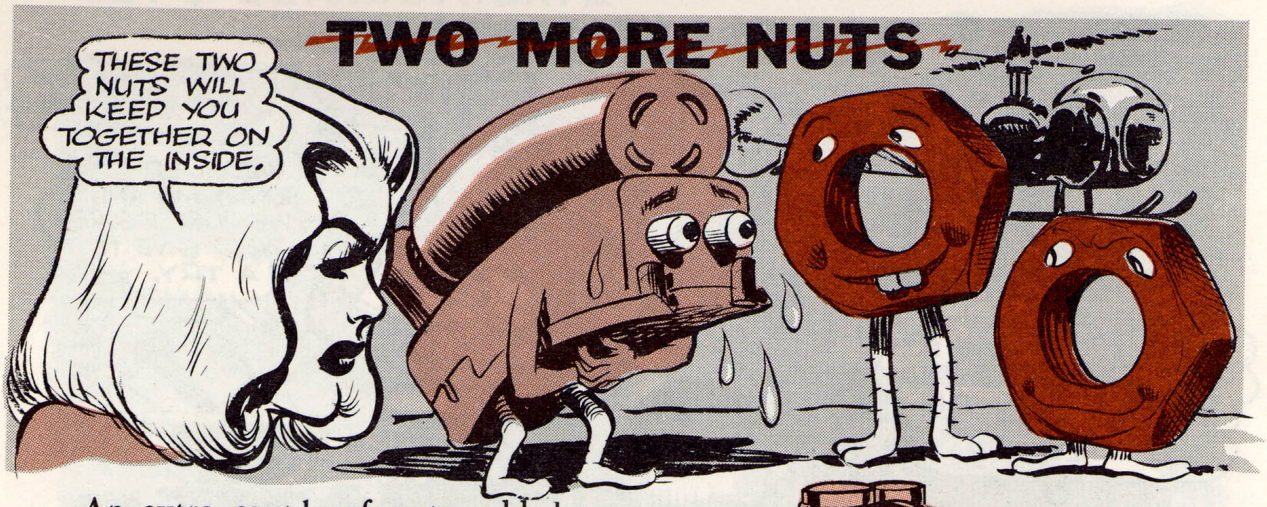
Once the locks are busted, the whole mast base must be replaced.

To keep your base intact and antenna on the beam, be sure you pull this check: **Before raising** the antenna and **before lowering** the antenna, make triple sure the locking arms are **unlocked.**

This simple operational check will keep your locks locked when they have to be locked and make sure your OA-482/TRC is pointed in the right direction.

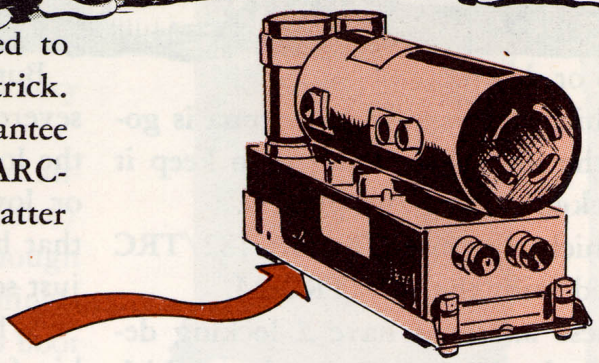


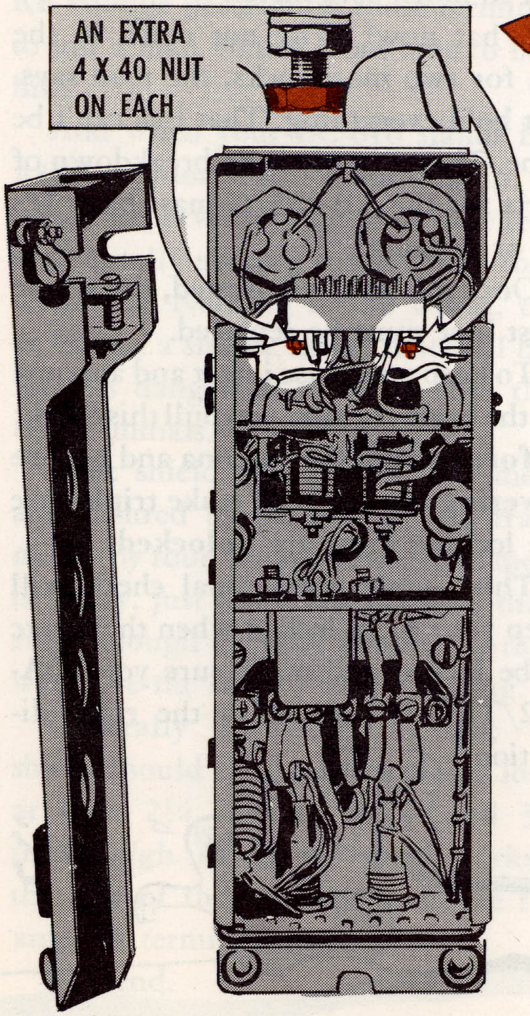
TWO MORE NUTS



An extra couple of nuts—added to the two already there—will do the trick.

And it's a simple trick to guarantee that the Dynamotor in your AN/ARC-44 Radio Set keeps on the job no matter how bad the vibration gets.



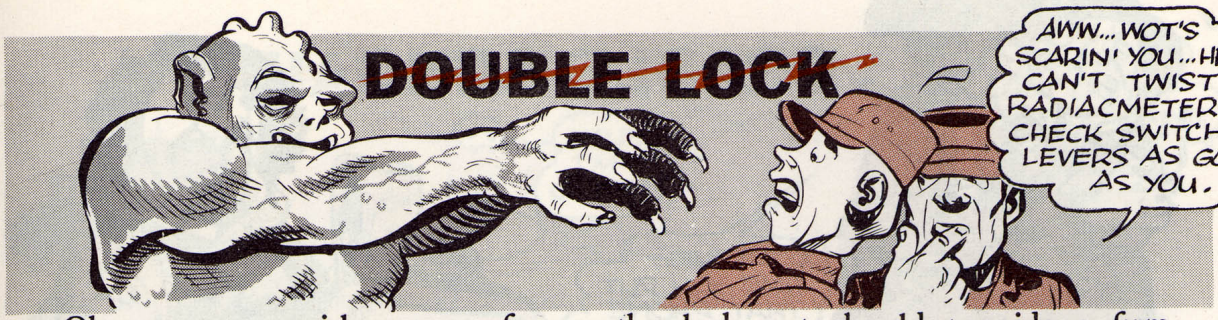


It all shakes down to this: the J101 Receptacle on the MT-1267/AR Dynamotor Mounting has been working loose in the course of routine vibration within the aircraft. Shouldn't happen.

What actually works loose are the two 4x40 nuts that hold the receptacle in place on the mounting. This leads to a loose connection between the harness and the dynamotor—which really means no connection at all.

And all those nuts need are some reinforcements . . . in the form of two more nuts. An extra 4x40 nut over each of the two already holding the receptacle will act as a jam nut and settle the vibration problem for good.

And even if a receptacle has not yet shown signs of loosening, the extra nuts will provide a touch of sound PM that'll make sure the unit doesn't get the shakes later on.

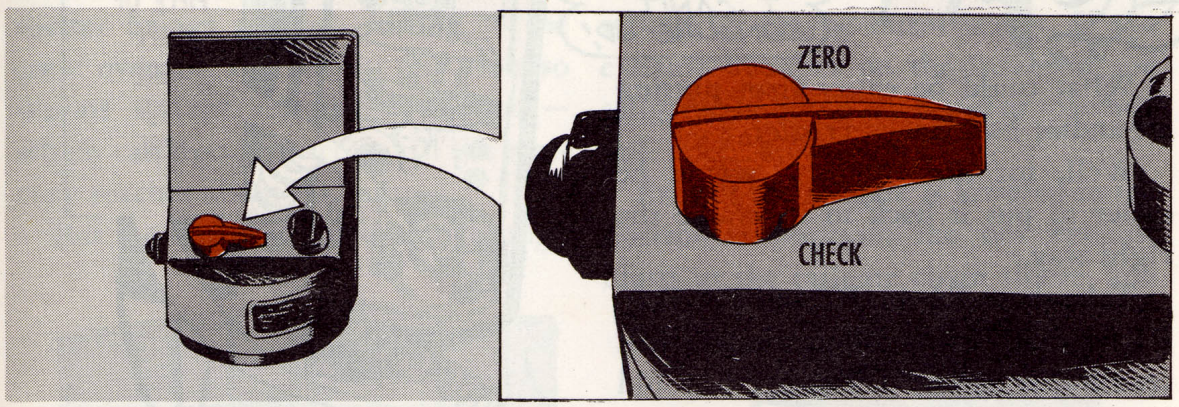


Oh sure, a guy with a strong finger could do it.

Some guys with strong fingers have done it—but with damaging results. Actually pushed so hard on the Check Switch lever on their IM-108/U Radiacmeter that they turned the whole switch assembly, not just the shaft.

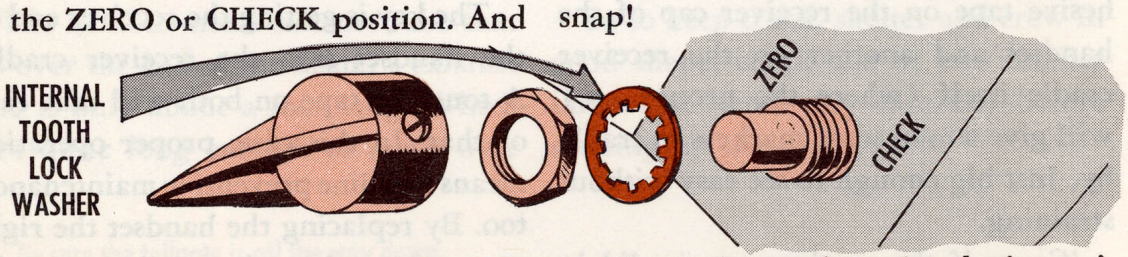
This shifting of the switch snaps delicate wires and ruptures fragile connections inside and means your Radiacmeter now will only **look** good—but not **work** so good, maybe.

That spring-mounted lever needs only a few pounds pressure to move it to the ZERO or CHECK position. And the lock nut should provide a firm enough anchor to keep the switch in place . . . no matter how hard a man bears down.



But to make forever sure the switch stands firm, slip off the switch lever and back off the switch retaining lock nut. Before putting them back on, slip an internal tooth lock washer (FSN 5310—193—7446) down over the switch shaft until it's flush against the panel.

Once you tighten the retaining nut in place over that washer, nothing will cause the switch to shift. Before you could do that, the whole lever would snap!



Newer models of the IM-108 will now have the washer already in position. The perfect solution and best operation, of course, is to stop pressing on the lever as soon as it reaches the end of its travel in either CHECK or ZERO direction.

~~CRADLE~~ SONG

What could be easier than putting a handset back in its cradle?

Well, for one thing, it would be easier to put it back in its cradle the **right** way.

Take those TA-43/PT and TA-312/PT field telephones. Many a talker will cradle the H-60/PT handset any old way. He'll drop the receiver end of the handset into the microphone end of the cradle. And maybe the other way around.

Come to think of it, a man really has little way of tellin' for sure which end goes where. To scramble the message more, it's easy enough to replace the handset either way . . . which doesn't help things along.

So. Easily fixed. A tiny patch of adhesive tape on the receiver cap of the handset and another on the receiver cradle itself (where the prongs are) will give a man some markers to cradle by. Just big enough to see easy without straining.

'Cause if the receiver cap is slid in gently against the two prongs in the cradle, then the transmitter end of the handset can be dropped down easily into its cradle—where those two little retaining knobs will hold it where it belongs.

Doing it this way, also, will just about eliminate the risk of getting tied up with the handset cord.

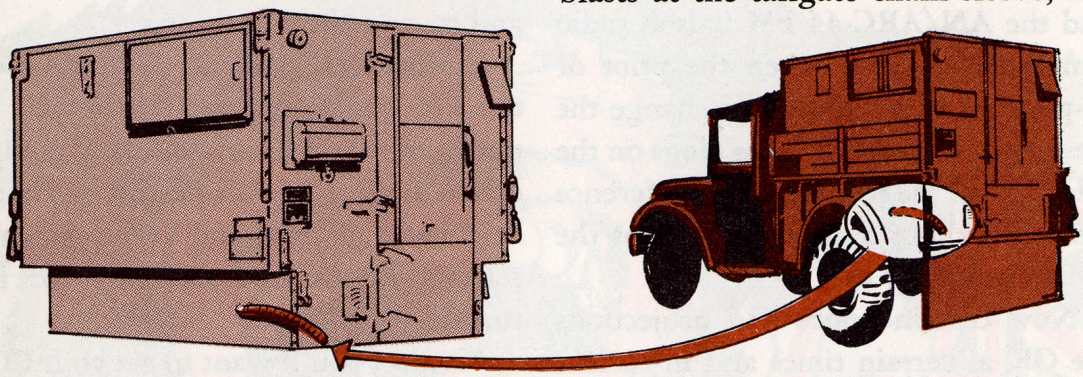
The key is getting the receiver end of the handset into the receiver cradle. A touch of tape on both will take care of that. In this case, proper operation means first-line preventive maintenance, too. By replacing the handset the right way, a man just about eliminates the need for maintenance on the prongs, cradles and receiver and transmitter caps.

EXHAUSTING PROBLEM

The hot air goes 'round and 'round and comes out—in two places.

Most important of all is where it comes out inside your AN/GRC-46. That little heater in the rear of the shelter brings a warm feeling to the crew even on the coldest day. It also warms up the teletype equipment—which can't go into action till the mercury reaches about 50 degrees.

But the heat also comes out through the exhaust pipe outside the shelter. Which has been leading to trouble. Trouble for the gents inside the shelter and trouble for the ¾-ton truck that carries the ANGRY 46.



The flexible metal exhaust tube that fits over the end of the heater's exhaust pipe is only about a foot long. Which isn't quite long enough to reach over the top of the tailgate or over the side of the truck.

If the exhaust breathes on the wooden stakes running along the side of the truck—the result is scorched stakes. Or maybe burnt stakes. If the exhaust breathes on the inside of the tailgate, the result is a burnt or scorched tail.

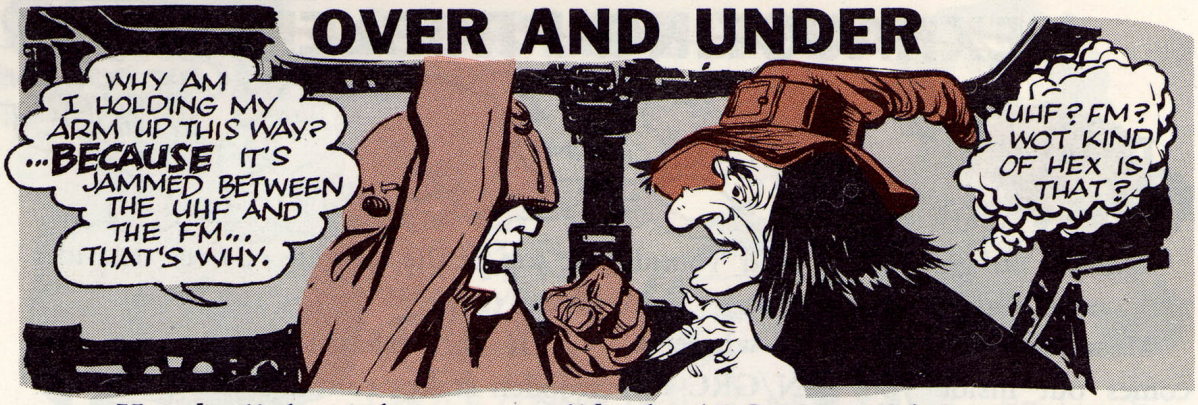
Even if the tailgate is lowered to the horizontal position, the hot exhaust blasts at the tailgate chain sleeve, and sooner or later sends it up in smoke.

Worst of all, if the fumes back up inside the hut, the result is a very sleepy crew. Maybe a permanently sleepy crew.

So to keep truck, shelter and crew in good shape, check one or two mighty important items very carefully before starting up the heater:

1. Be sure the tailgate is all the way down.
2. Be sure the exhaust tube is not pointed directly at the stakes. Aim it upward and toward the rear of the truck.
3. If your CO puts his OK on the idea, cut a small hole in the left rear panel of the truck and poke the exhaust tube through that.

OVER AND UNDER



Heard tell there's been some mild cursin' in the cockpit of later model beavers (L-20's).

The friendly kind, of course, but a sure sign that maybe something should be checked into.

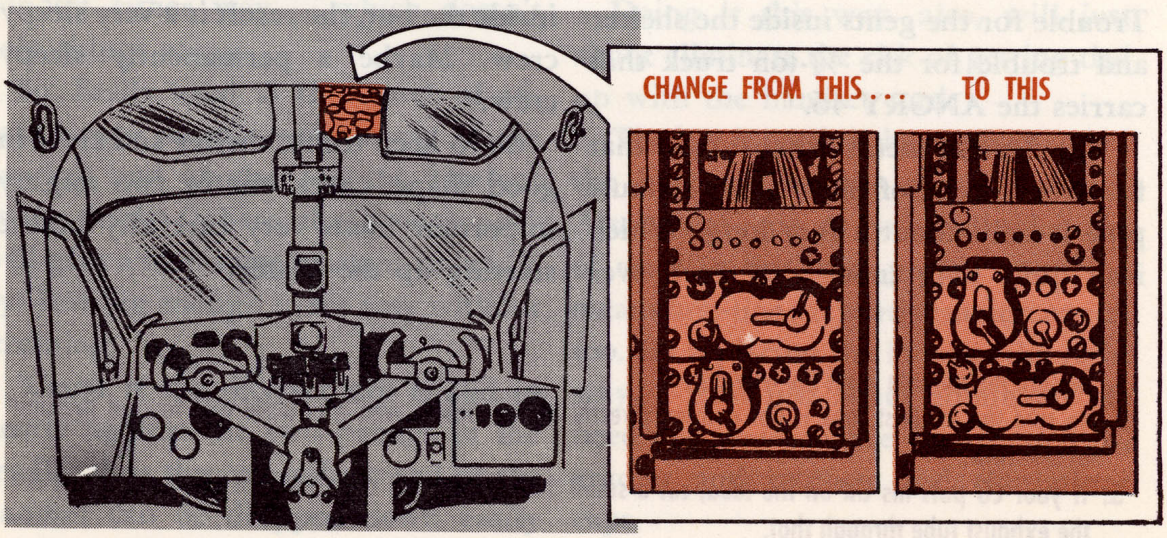
In this case, it's the arrangement of the AN/ARC-55 UHF command radio and the AN/ARC-44 FM liaison radio panels. Seems that when the pilot or co-pilot sticks a hand up to change the frequency with the selector rings on the UHF panel he runs into interference from the knobs and projections of the FM Panel.

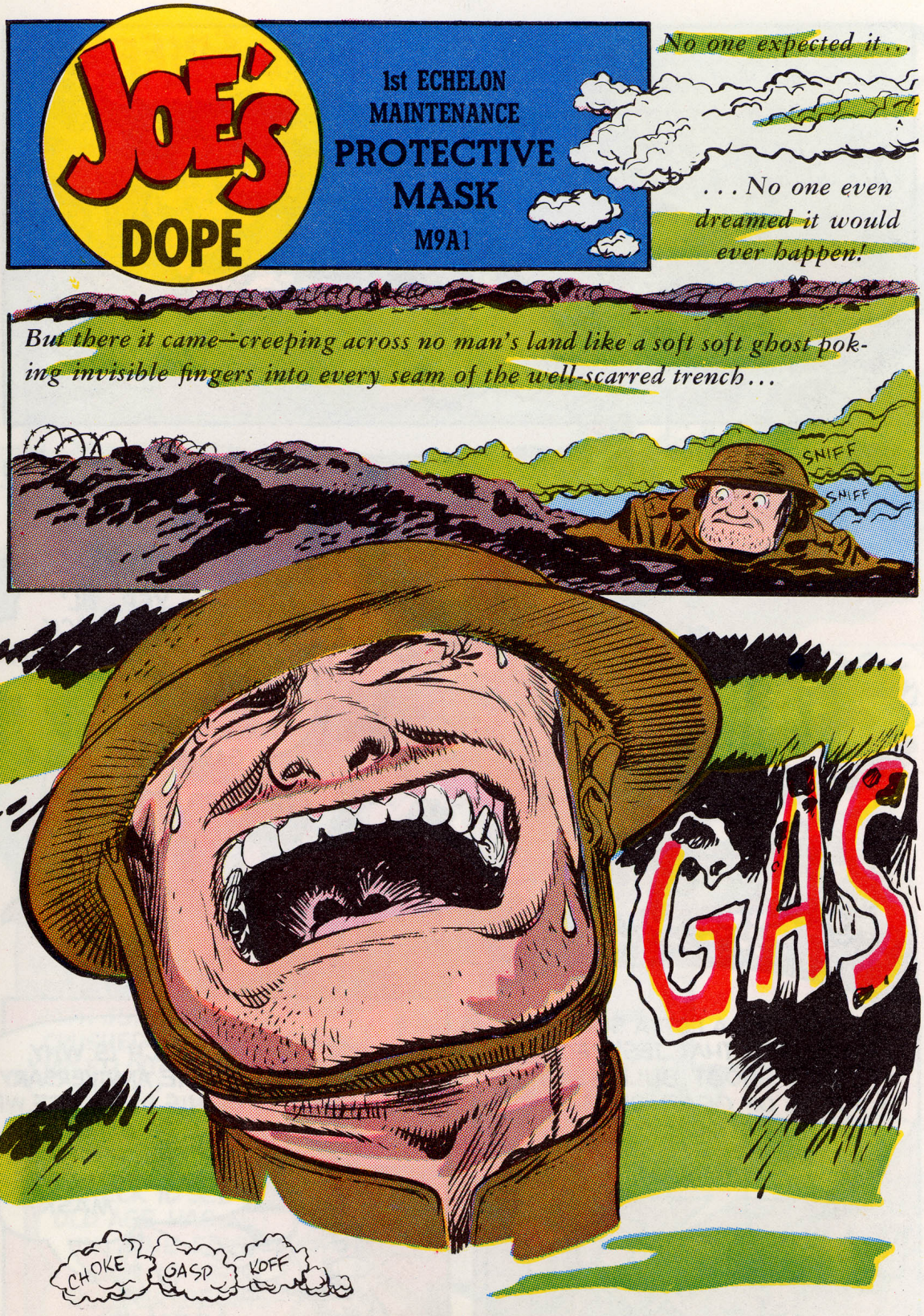
Now certain knobs and projections are OK at certain times and in certain places, but a man has to get a pretty good grip on the knurled ring knobs of the ARC 55 to click it to another freq setting. Which is hard when the UHF panel is positioned above the FM panel . . . and when a man is wearing gloves.

So a simple re-arrangement will ease things nicely. Just back off the four Dzus fasteners on each unit . . . slip the UHF and FM panels out of the rack . . . and reverse their positions.

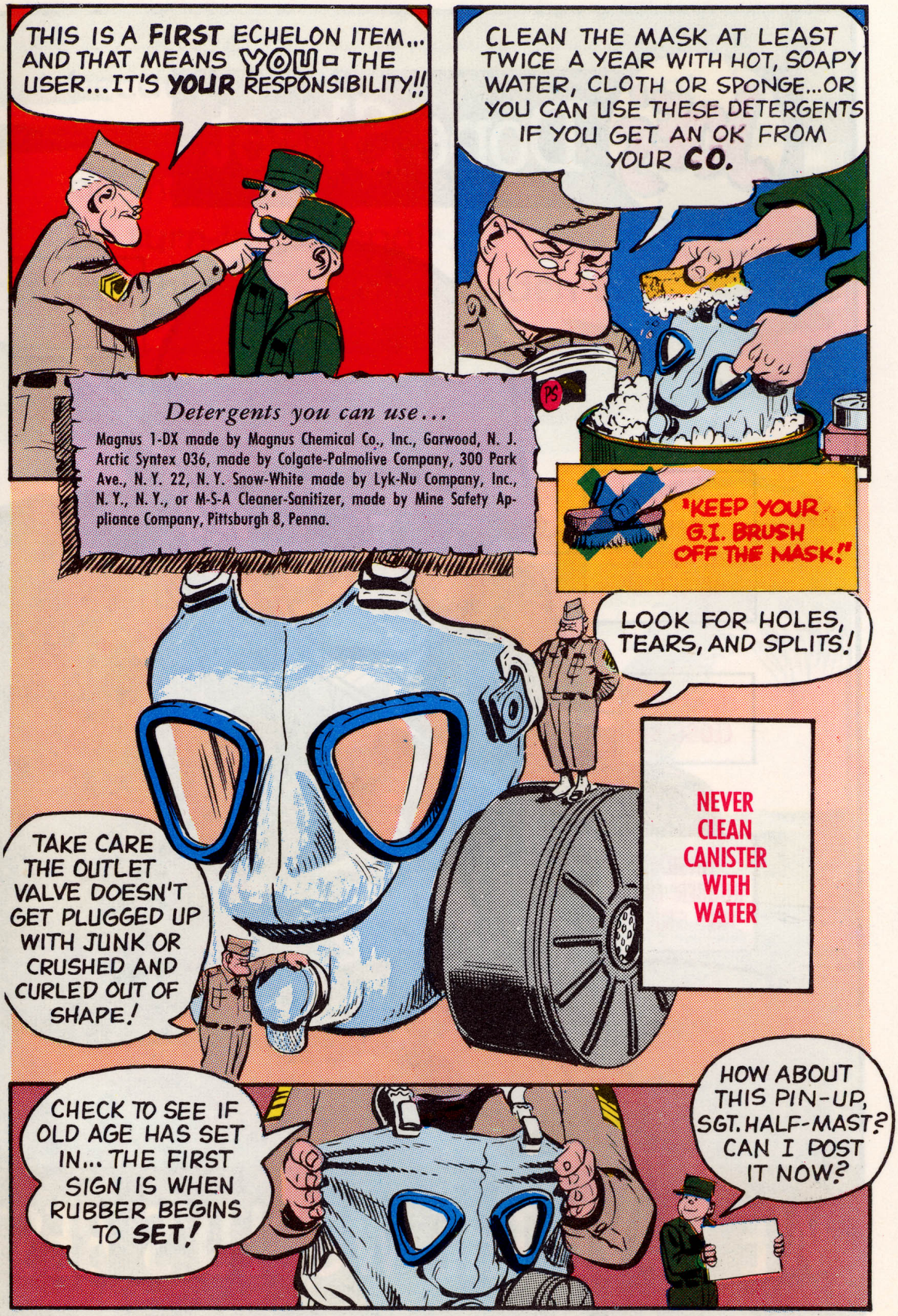
Put the UHF panel in the rack **below** the FM panel. No need to rewire or put in new wires—or make any modification at all. Just shift positions. That'll help hand motion, and keep your freq selector knobs free and easy for the turns.

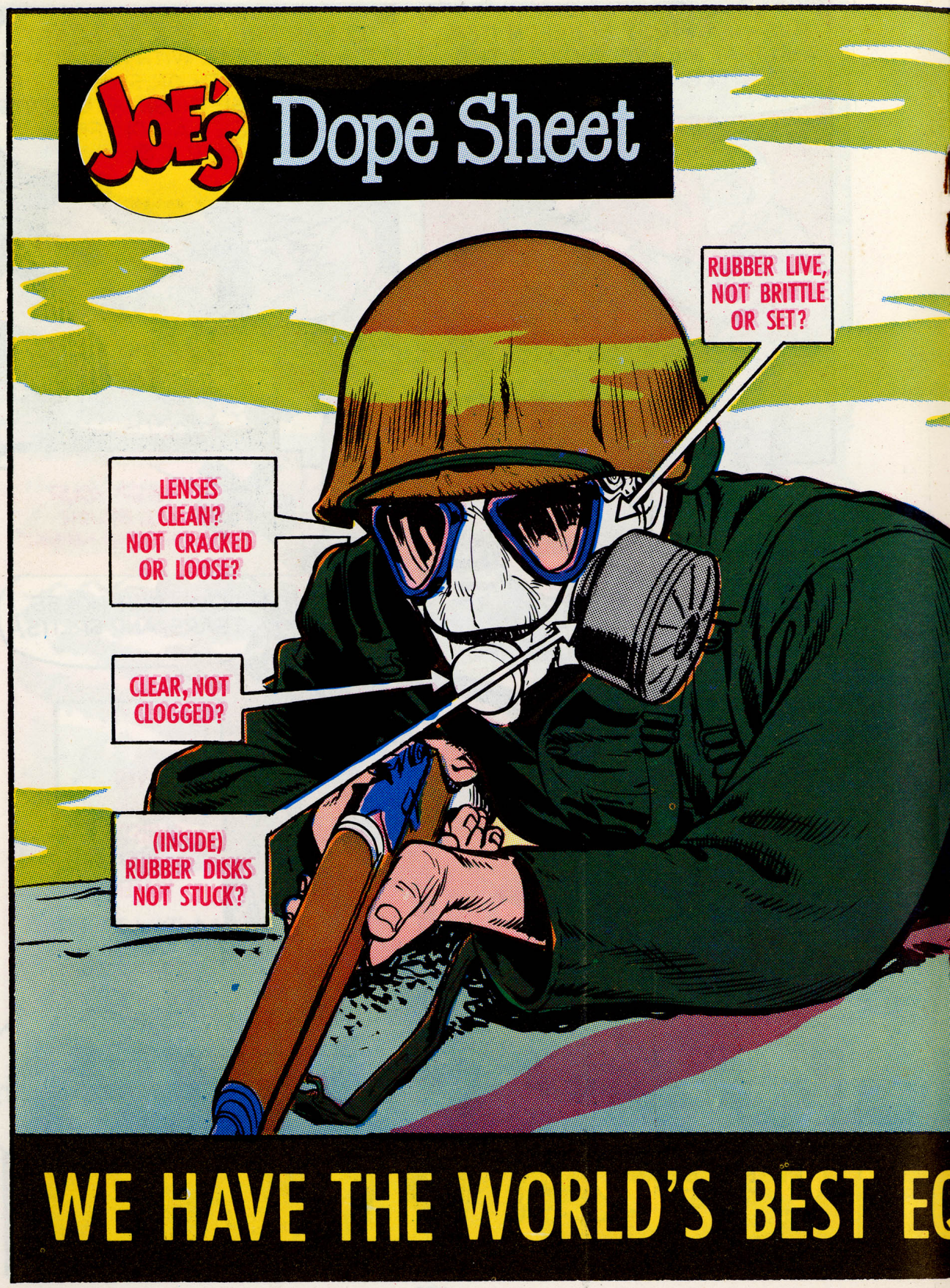
'Course, you'll want to get your CO's OK before you make the switch.



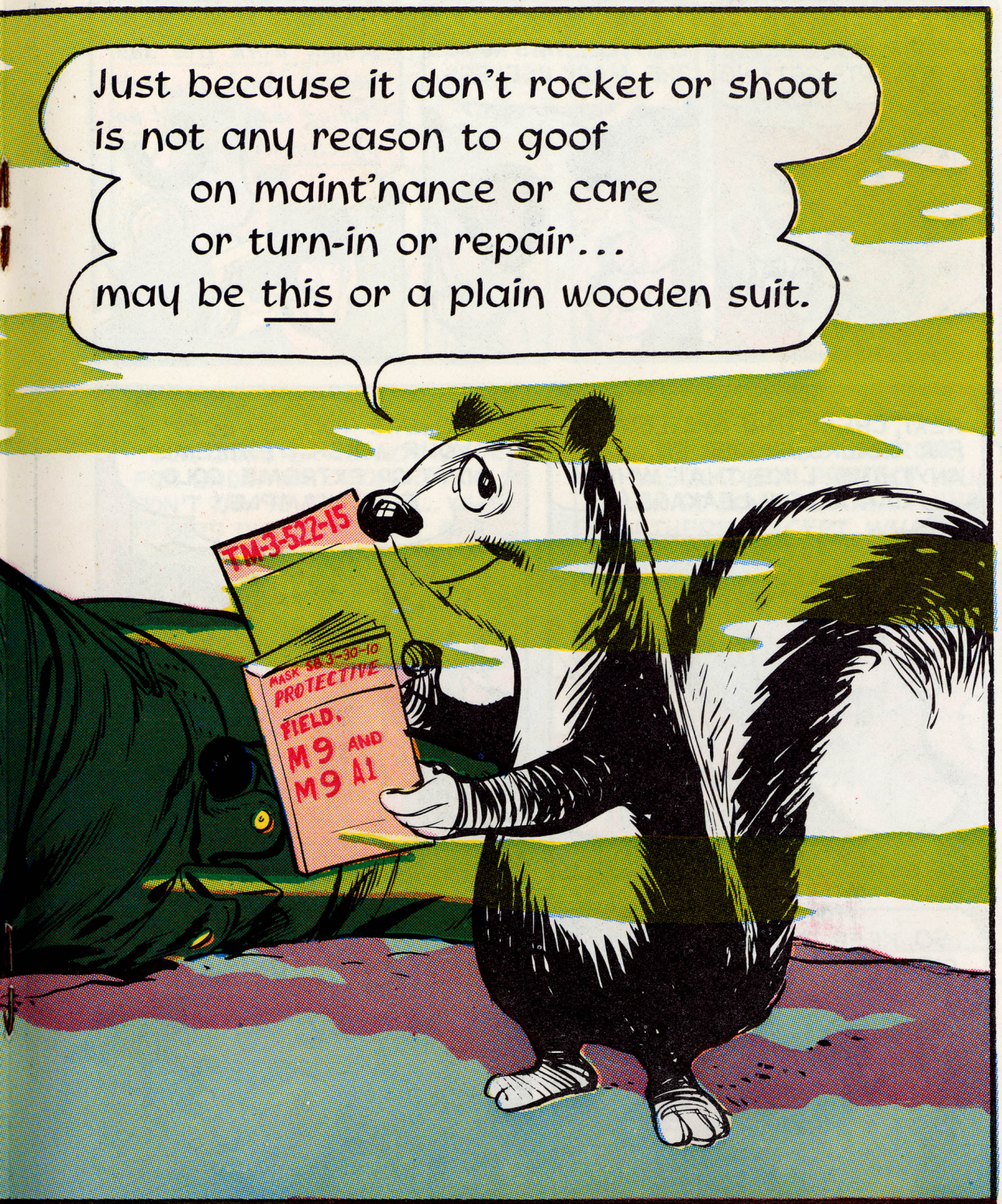

JOE'S DOPE
1st ECHELON MAINTENANCE
PROTECTIVE MASK
M9A1
No one expected it...
...No one even dreamed it would ever happen!
But there it came—creeping across no man's land like a soft soft ghost poking invisible fingers into every seam of the well-scarred trench...
SNIFF
SNIFF
GAS
CHOKE
GASP
KOFF
like an electric current word whipped down the line and in an instant the men were groping for their masks...

Now, suddenly the glamorless mask they had lugged all across France became as important as the rifle...perhaps more—it takes a live soldier to fire a rifle.
GOOD GRIEF!
You guessed it...the canvas was rotted thru the rubber in the hose dried and porous. A glass eye piece cracked and loose.
GOSH!
YEP...OL' ABEL McCANICK, THE BEST MAINTENANCE MAN IN THE RAINBOW DIVISION, F'GOT JES' ONE THING - HIS GAS MASK!
SEEMS LIKE A LOTTA SOLDIERS HE FIGURED THAT JES' BECAUSE IT DON'T SHOOT BULLETS THAT A PIECE OF GEAR C'N GET ALONG WITH SLOPPY MAINTENANCE...
...WHICH IS WHY, ON THE ANNIVERSARY OF HIS DEE-MISE, WE WILL DO A "FOLLOW-ME" CHECK ON OUR M9A1 PROTECTIVE MASK!

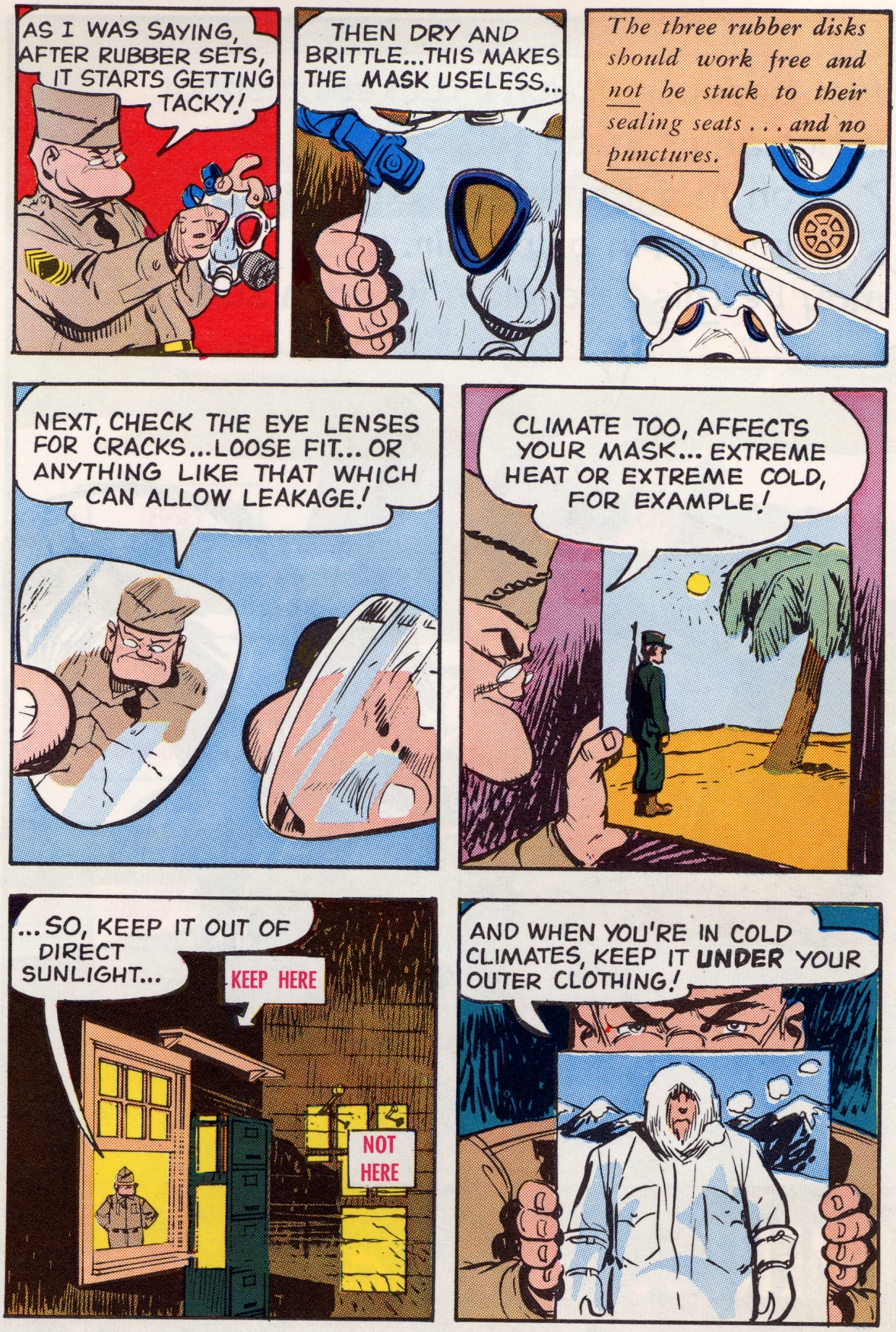

THIS IS A FIRST ECHELON ITEM... AND THAT MEANS YOU ▫ THE USER... IT'S YOUR RESPONSIBILITY!!
CLEAN THE MASK AT LEAST TWICE A YEAR WITH HOT, SOAPY WATER, CLOTH OR SPONGE...OR YOU CAN USE THESE DETERGENTS IF YOU GET AN OK FROM YOUR CO.
Detergents you can use...
Magnus 1-DX made by Magnus Chemical Co., Inc., Garwood, N. J. Arctic Syntex 036, made by Colgate-Palmolive Company, 300 Park Ave., N. Y. 22, N. Y. Snow-White made by Lyk-Nu Company, Inc., N. Y., N. Y., or M-S-A Cleaner-Sanitizer, made by Mine Safety Appliance Company, Pittsburgh 8, Penna.
"KEEP YOUR G.I. BRUSH OFF THE MASK!"
LOOK FOR HOLES, TEARS, AND SPLITS!
NEVER CLEAN CANISTER WITH WATER
TAKE CARE THE OUTLET VALVE DOESN'T GET PLUGGED UP WITH JUNK OR CRUSHED AND CURLED OUT OF SHAPE!
CHECK TO SEE IF OLD AGE HAS SET IN... THE FIRST SIGN IS WHEN RUBBER BEGINS TO SET!
HOW ABOUT THIS PIN-UP, SGT. HALF-MAST? CAN I POST IT NOW?

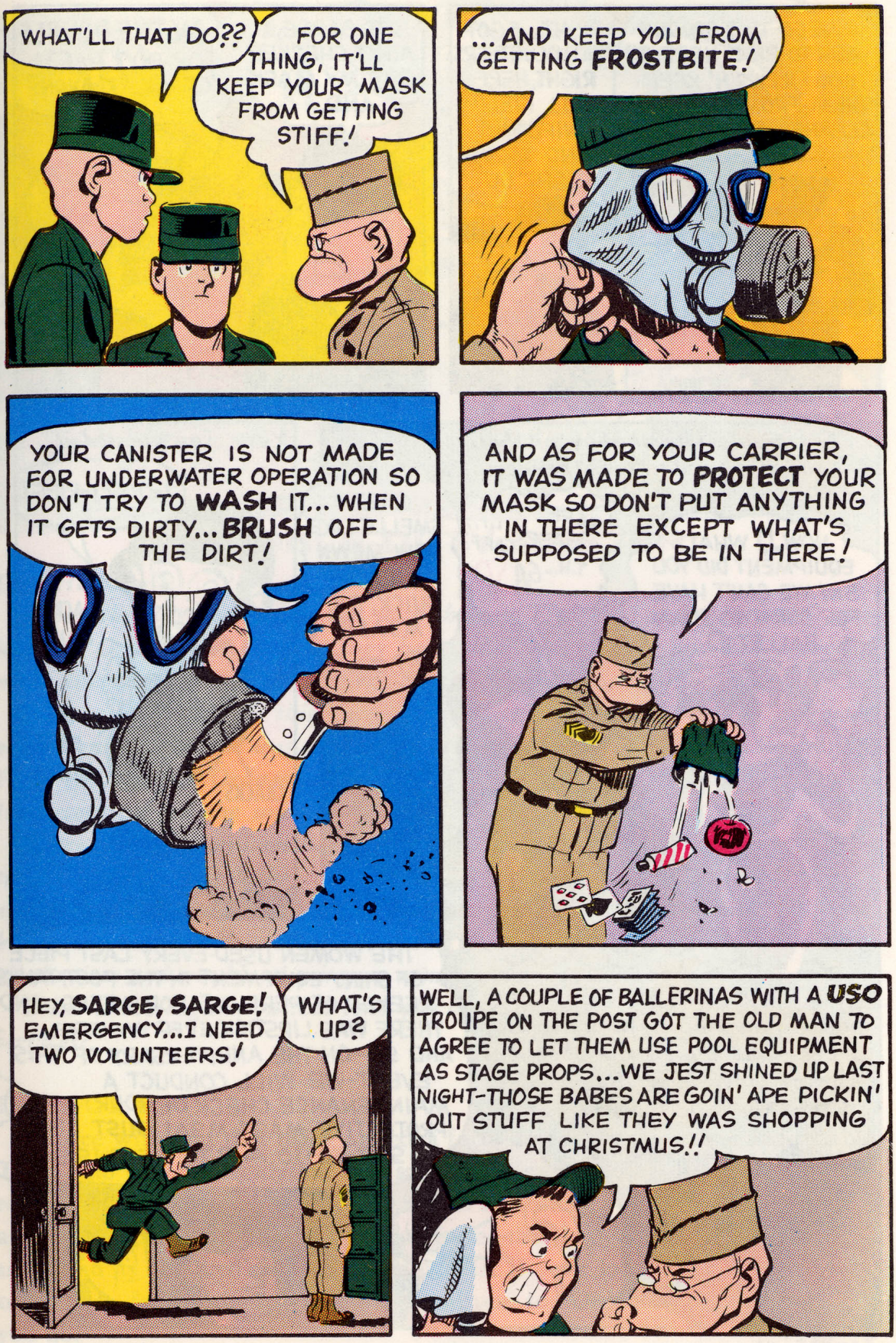

JOE'S
Dope Sheet
RUBBER LIVE, NOT BRITTLE OR SET?
LENSES CLEAN? NOT CRACKED OR LOOSE?
CLEAR, NOT CLOGGED?
(INSIDE) RUBBER DISKS NOT STUCK?
WE HAVE THE WORLD'S BEST EQ

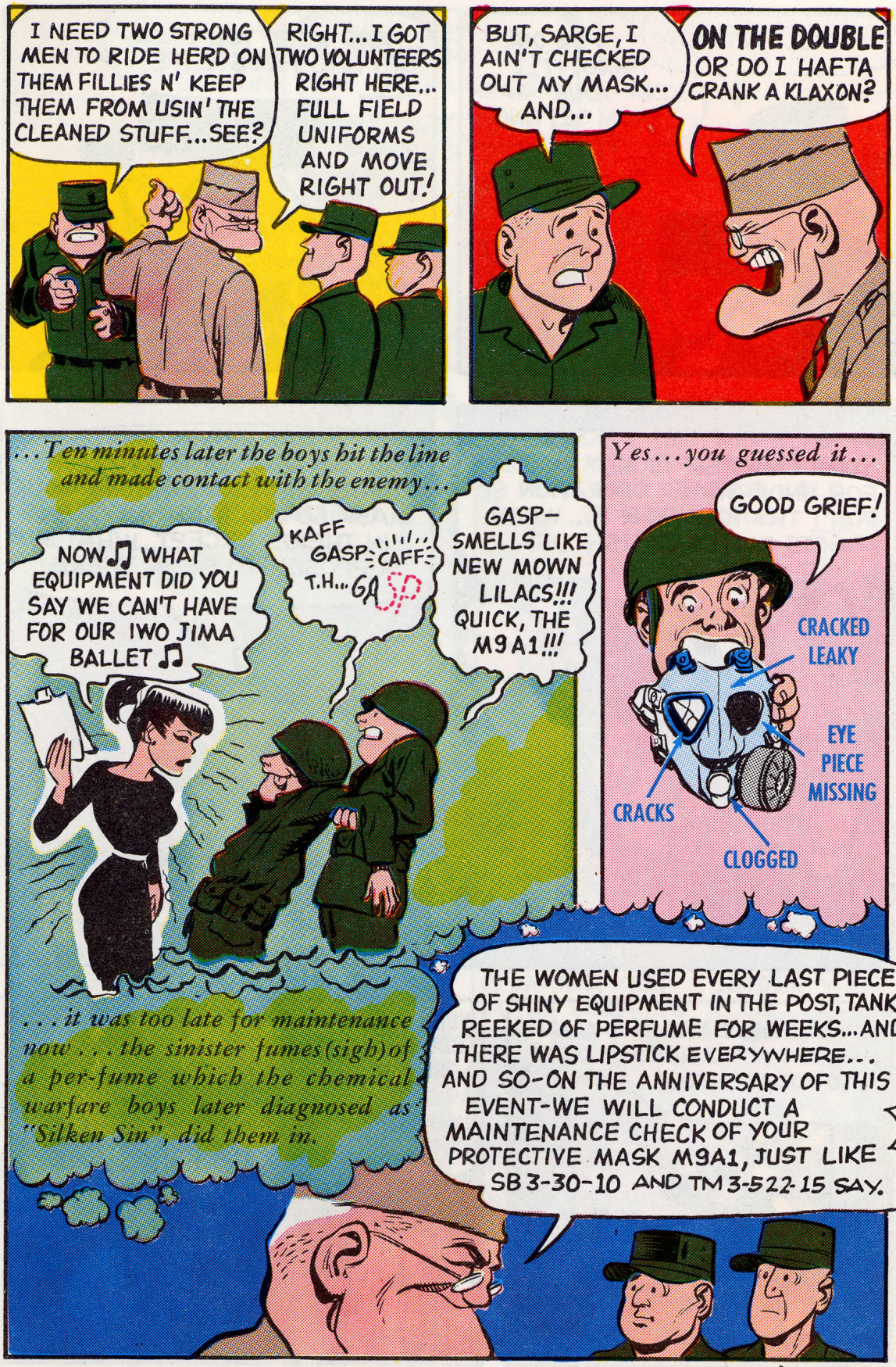
JOE'S Dope Sheet
Just because it don't rocket or shoot
is not any reason to goof
on maint'nance or care
or turn-in or repair...
may be this or a plain wooden suit.
RUBBER LIVE, NOT BRITTLE OR SET?
LENSES CLEAN? NOT CRACKED OR LOOSE?
CLEAR, NOT CLOGGED?
(INSIDE) RUBBER DISKS NOT STUCK?
TM-3-5ZZ-15
MASK, GAS, E-30-10 PROTECTIVE FIELD, M9 AND M9 A1
WE HAVE THE WORLD'S BEST EQUIPMENT ... Take care of it

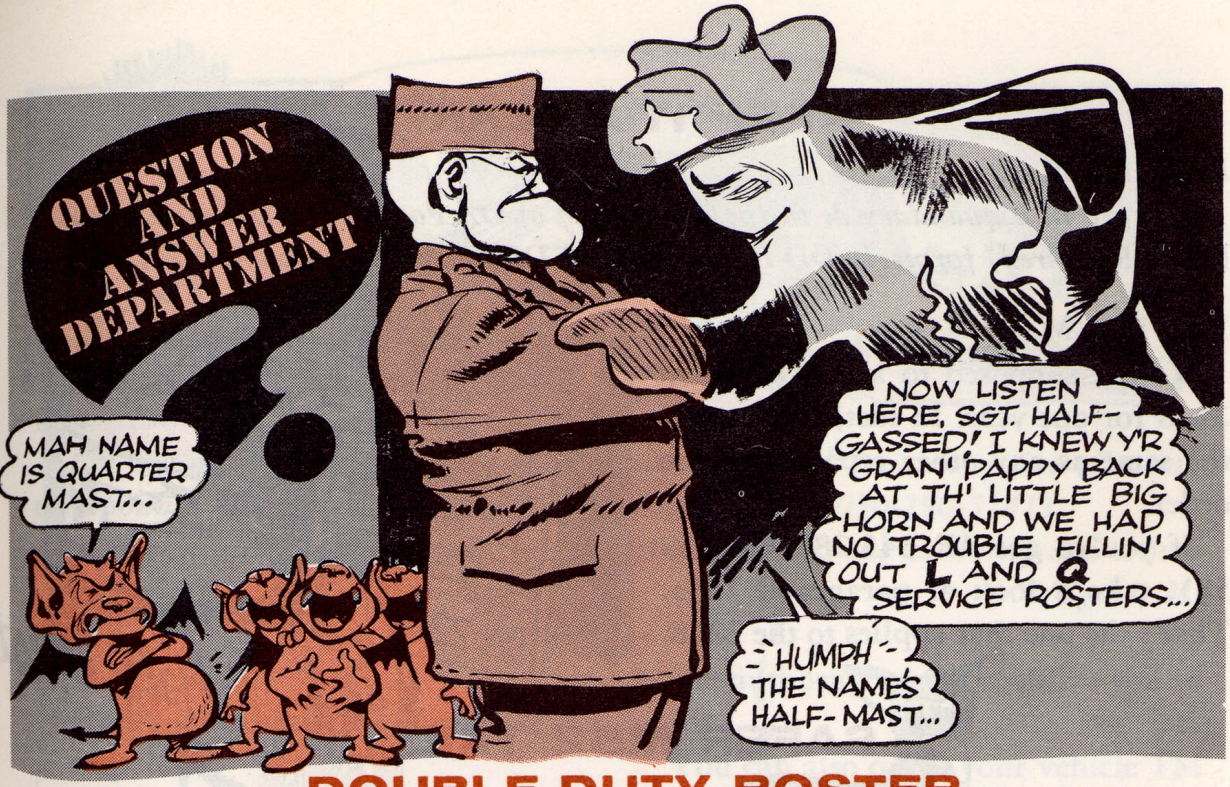


QUIPMENT ... *Take care of it*


AS I WAS SAYING, AFTER RUBBER SETS, IT STARTS GETTING TACKY!
THEN DRY AND BRITTLE...THIS MAKES THE MASK USELESS...
The three rubber disks should work free and not be stuck to their sealing seats . . . and no punctures.
NEXT, CHECK THE EYE LENSES FOR CRACKS...LOOSE FIT... OR ANYTHING LIKE THAT WHICH CAN ALLOW LEAKAGE!
CLIMATE TOO, AFFECTS YOUR MASK... EXTREME HEAT OR EXTREME COLD, FOR EXAMPLE!
...SO, KEEP IT OUT OF DIRECT SUNLIGHT...
KEEP HERE
NOT HERE
AND WHEN YOU'RE IN COLD CLIMATES, KEEP IT UNDER YOUR OUTER CLOTHING!


WHAT'LL THAT DO??
FOR ONE THING, IT'LL KEEP YOUR MASK FROM GETTING STIFF!
... AND KEEP YOU FROM GETTING FROSTBITE!
YOUR CANISTER IS NOT MADE FOR UNDERWATER OPERATION SO DON'T TRY TO WASH IT... WHEN IT GETS DIRTY... BRUSH OFF THE DIRT!
AND AS FOR YOUR CARRIER, IT WAS MADE TO PROTECT YOUR MASK SO DON'T PUT ANYTHING IN THERE EXCEPT WHAT'S SUPPOSED TO BE IN THERE!
HEY, SARGE, SARGE! EMERGENCY...I NEED TWO VOLUNTEERS!
WHAT'S UP?
WELL, A COUPLE OF BALLERINAS WITH A USO TROUPE ON THE POST GOT THE OLD MAN TO AGREE TO LET THEM USE POOL EQUIPMENT AS STAGE PROPS...WE JEST SHINED UP LAST NIGHT-THOSE BABES ARE GOIN' APE PICKIN' OUT STUFF LIKE THEY WAS SHOPPING AT CHRISTMUS!!


I NEED TWO STRONG MEN TO RIDE HERD ON THEM FILLIES N' KEEP THEM FROM USIN' THE CLEANED STUFF...SEE?
RIGHT... I GOT TWO VOLUNTEERS RIGHT HERE... FULL FIELD UNIFORMS AND MOVE RIGHT OUT!
BUT, SARGE, I AIN'T CHECKED OUT MY MASK... AND...
ON THE DOUBLE OR DO I HAFTA CRANK A KLAXON?
...Ten minutes later the boys hit the line and made contact with the enemy...
NOW♫ WHAT EQUIPMENT DID YOU SAY WE CAN'T HAVE FOR OUR IWO JIMA BALLET♫
KAFF GASP CAFF T.H... GASP
GASP— SMELLS LIKE NEW MOWN LILACS!!! QUICK, THE M9A1!!!
...it was too late for maintenance now... the sinister fumes (sigh) of a per-fume which the chemical warfare boys later diagnosed as "Silken Sin", did them in.
Yes... you guessed it...
GOOD GRIEF!
CRACKED LEAKY
EYE PIECE MISSING
CRACKS
CLOGGED
THE WOMEN USED EVERY LAST PIECE OF SHINY EQUIPMENT IN THE POST, TANKS REEKED OF PERFUME FOR WEEKS... AND THERE WAS LIPSTICK EVERYWHERE... AND SO-ON THE ANNIVERSARY OF THIS EVENT-WE WILL CONDUCT A MAINTENANCE CHECK OF YOUR PROTECTIVE MASK M9A1, JUST LIKE SB 3-30-10 AND TM 3-522-15 SAY.



DOUBLE-DUTY ROSTER

Dear Half-Mast,

When the Engineers came out with the new TM 5-505 and the L and Q services like Ordnance, I thought they had talked things over and had agreed to make things easier for the troops. But, it didn't work out that way.

Some of the units in this Group only have one or two items of Engineers equipment. So, since it was easier, they were added on the same PM Roster, DA Form 460, with the Ordnance items. The Engineers say it's OK, but the Ordnance Inspectors gigged the units.

When you have an item like a truck-mounted compressor, we like to put the truck (Ordnance) and the compressor (Engineer) on the same roster—listed separately. We know when we schedule them for services on a mileage and hours basis, they both may not come due at the same time. But, at least, we've saved all the time and trouble of using an extra form.

What is the regulation that tells you to use separate rosters for different tech services?

SFC L. P.

Dear SFC L. P.,

I agree with you that using an extra form makes for extra time and trouble. There's no general regulation that says you'll use separate rosters for different tech services. As long as you list each item separately, you can include Engineer and Ordnance equipment on the same form—the way you did your Ordnance truck and its mounted compressor. However, if your local SOP says you'll use one roster for Engineer equipment and one for Ordnance, then that's what you do.

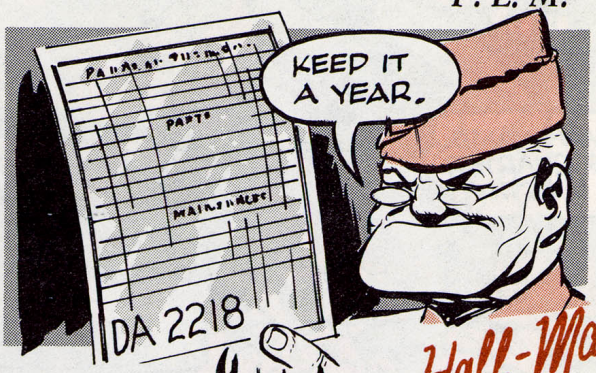
Half-Mast

KEEP IT A YEAR

Dear Half-Mast,

We are in a quandary as to the disposition of DA Form 2218 (Parts Slip and Work Required) formerly DD Form 315 and DD Form 316. Can you help us?

P. L. M.



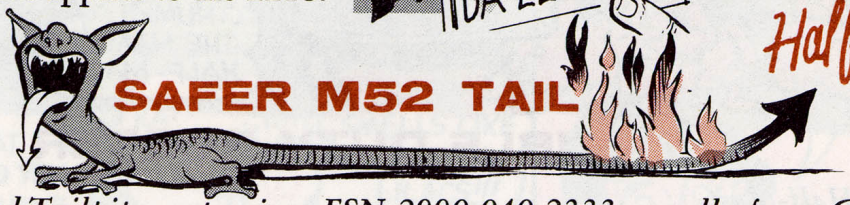
Dear P. L. M.,

You're supposed to keep DA Form 2218 for one year. In fact, you treat it the same as any other repair shop job order.

If you've got AR 345-280 (10 Oct 58), take a look at paragraph 183a. That's the one that applies to the 2218.

Half-Mast

SAFER M52 TAIL



Dear Half-Mast,

We've installed Tailpipe, extension, FSN 2990-040-2333, on all of our G744-series vehicles like it says in TB 9-2320-211-20/1 (2 May 58).

But all that exhaust heat near the right gas tanks on the M52's makes drivers as nervous as a man hauling a cargo of nitro.

Seems to me these tailpipes would be a lot safer if they pointed up instead of down. What do you think, Sarge?

SFC J. M. A.

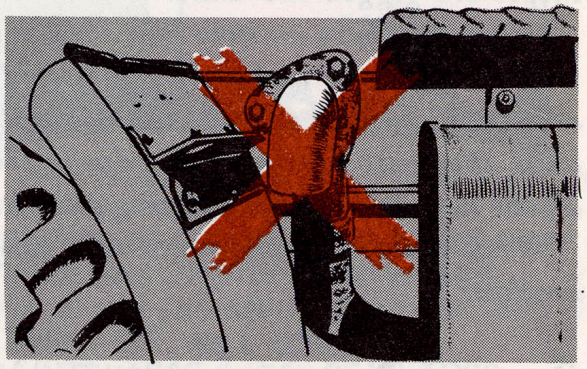
Dear SFC J. M. A.,

You've got a sharp eye for a hazard, Sarge. But a new tailpipe extension has been authorized just for the M52 truck-tractor that should take care of it.

It's 19-in Tailpipe, extension, FSN 2990-649-9484, and it's listed in TB 9-2320-211-20/1 (13 May 59), which supersedes the one dated 2 May 58. The new TB also lists the Clamp, FSN 2990-447-4726, and the Hanger, FSN 2990-741-1059, that you need to install the longer extension.

The 9¼-in tailpipe wears FSN 2990-040-2333 and is still the one you use on all G744-series vehicles except the M52.

Both the long and short tailpipes



point down, and here's why. Turning 'em up like you suggested might increase the fire hazard. It would mix heavier-than-air exhaust fumes with lighter-than-air gasoline fumes coming from the vent in the gas tank cap.

Half-Mast

Dear Half-Mast,

I'm having a little difficulty in requisitioning acid resistant paint (Coating Compound, Bituminous, Solvent Type, Black, FSN 8030-290-5141).

My requisition was returned for authority. What is the authority and where can I find it?

M/Sgt A. M.

Dear Sgt. A. M.,

Here's something that should get you your paint:

On page 65 of your TM 9-2810 it says this about cleaning and preserving materials, "These items are extracted from ORD 3 SNL K-1 and are requisitioned by using units as required."

Since the Engineers took over some of the K-1 items and you find it in SM 5-5-8000, I'd still use the TM 9-2810 as the authority which requires you to use it.

You can also quote your vehicle TM as authority. For example, TM 9-2350-213-20, chapter 2, Section IV, contains a paragraph on Specific Procedures for Quarterly Preventive Maintenance Services for batteries. This paragraph says the batteries get removed and cleaned and you repaint your battery box, if necessary.

Half-Mast

PLANE RECORD FOLDER

Dear Half-Mast,

Every aircraft in the Army has a plastic folder to keep records and forms in, but darned if I can find the nomenclature and Federal stock number for same. Can you help me?

SP/5 R. C. K.

Dear Specialist R. C. K.,

I know what you mean. You can find these folders listed in SM 10-1-7500, Change 5 (5 Aug 59) under Binder, Loose-Leaf, transparent vinyl plastic, 7-Ring . . . FSN 7510-300-3033 (QM). They're issued with each aircraft.

Explain on your requisition why you need a replacement and you shouldn't have any trouble getting a new one.

Half-Mast

HOLD DOWN THE BOOM

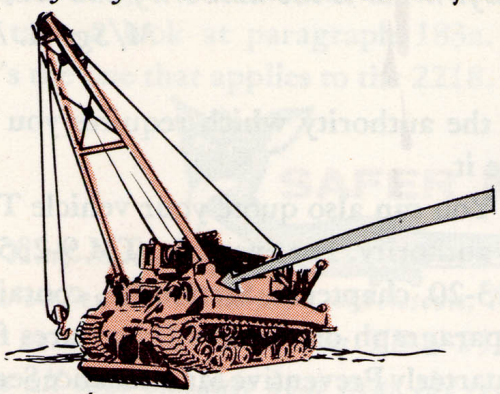
Dear Half-Mast,

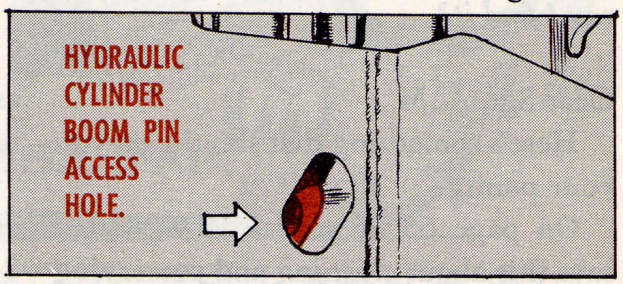
We are having trouble with our M74 tank recovery vehicle and thought you might be able to help us.

The pin on the cylinder boom doesn't stay put when the boom is in operation and this could be mighty dangerous.

Maybe you can tell us how to fix it.

M/Sgt C. P.





Dear M/Sgt C. P.,

Sarge, I got good news for you. You can get this fixed and it won't cost you any sweat.

Just turn your M74 in to Ordnance support and they'll apply MWO 9-2320-202-30/1 (25 Mar 60).

This is strictly a third echelon deal, but the MWO is URGENT, so you should get it done as soon as possible.

Half-Mast

TO WASH OR NOT

Dear. Half-Mast,

Our motor sergeant has come up with something new. He says not to wash the trucks before lining 'em up for the supervisor's inspection.

How come?

I was always told to clean things up for any kind of inspection.

PFC M. L.

Dear PFC M. L.,

That was the old Army and I remember it myself.

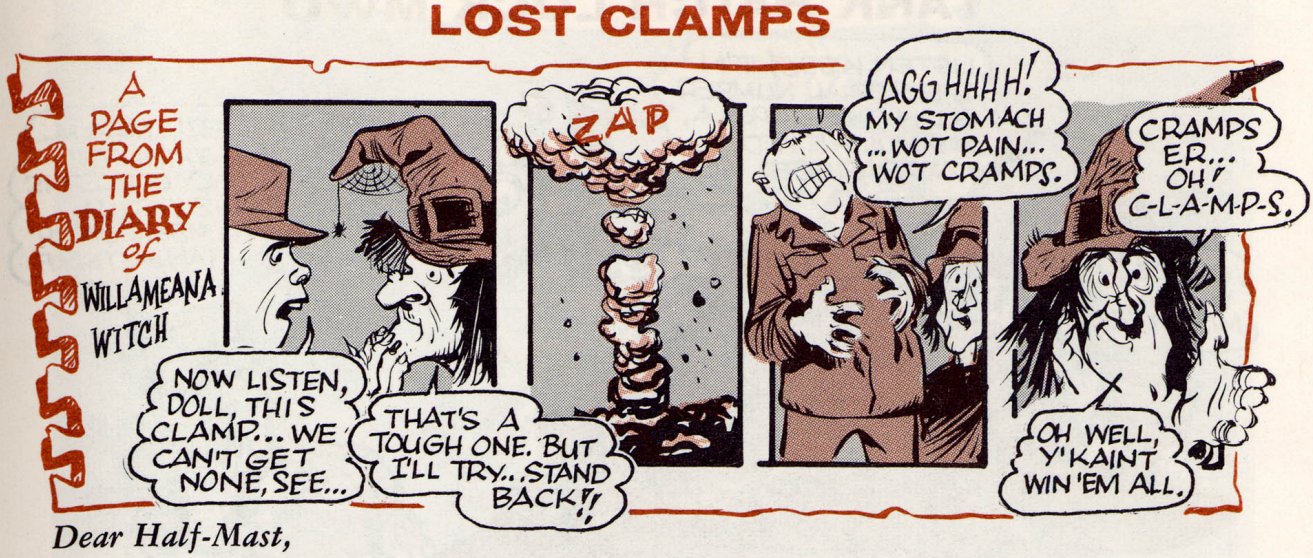
But you gotta change with the times and, besides, there's a good idea back of this.

If a vehicle is washed just before the supervisor's inspection it is harder to find looseness or damage that may cause leakage of lube or hydraulic fluids. This goes for both tracked and wheeled vehicles.

After you're sure your vehicle's in good working condition you can wash it for the CO's eagle eye.

Half-Mast

LOST CLAMPS

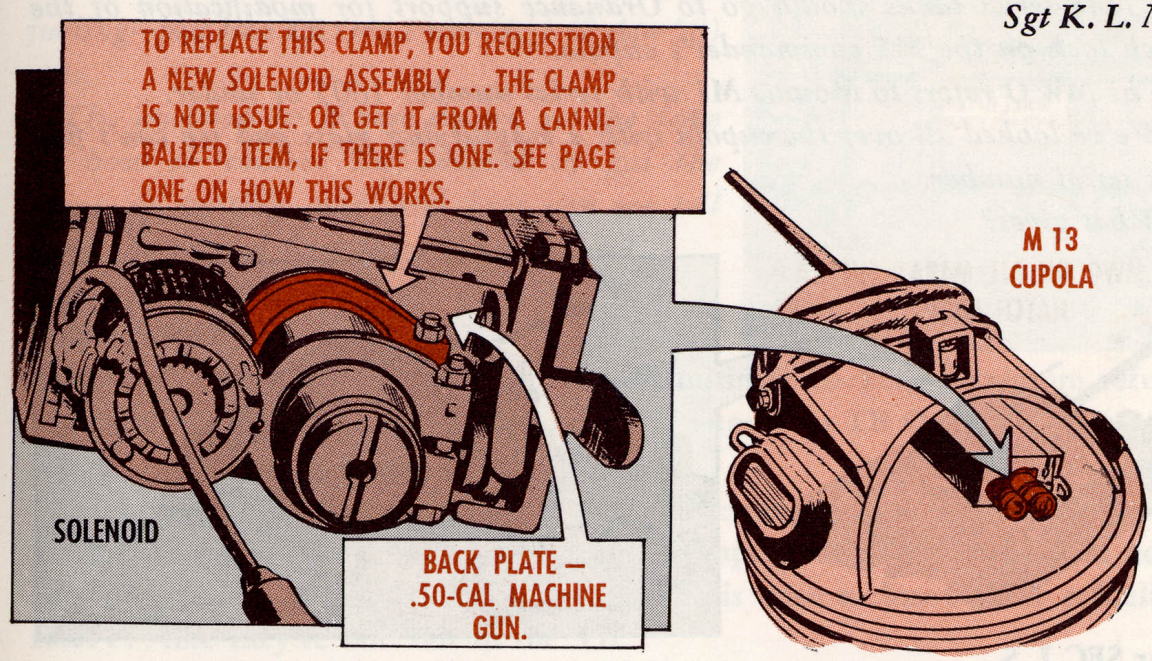


Dear Half-Mast,

This is for the M13 cupola on my M59 and M84 tracked vehicles.

How can I get the clamp that holds the solenoid of the .50-cal machine gun to the back plate?

Sgt K. L. M.



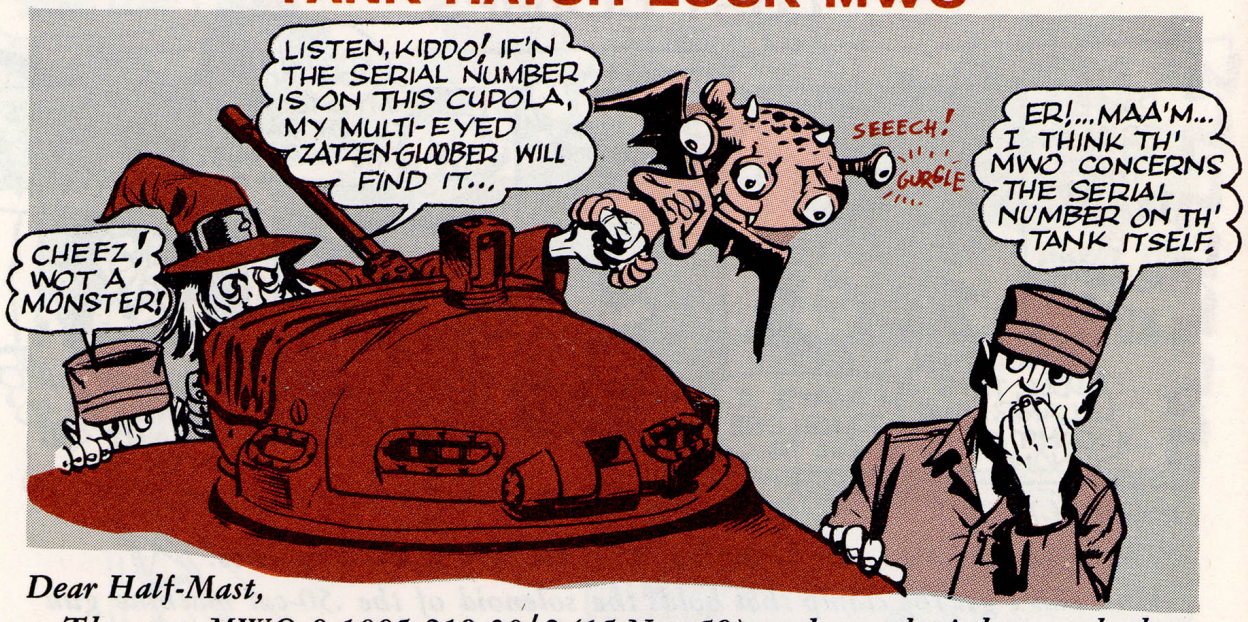
Dear Sgt K. L. M.

That clamp is part of the .50-cal's solenoid assembly and is not an item of issue. For that reason it's got no stock number. Its need as a replacement part has been just about nil and as a result it doesn't rate listing as a supply item.

In a rare case, though, the clamp might get lost when the machine gun and accessories are removed from the packing case. Wrapped separately, it could lay unnoticed and get tossed away with the wrappings. You could get the clamp from a cannibalized item, if one is available. Another way out would be to requisition a new solenoid assembly.

Half-Mast

TANK HATCH LOCK MWO



Dear Half-Mast,

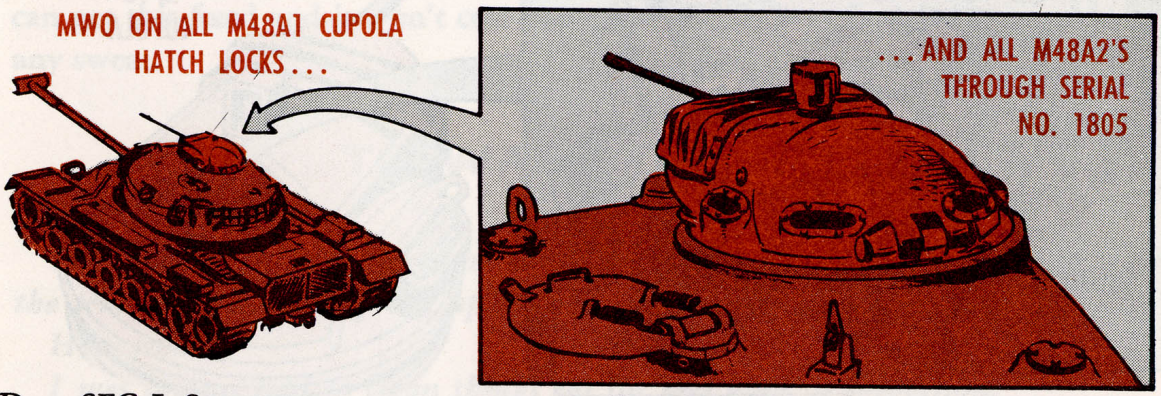
The way MWO 9-1005-219-30/2 (15 Nov 59) reads, we don't know whether our M48-series tanks should go to Ordnance support for modification of the hatch lock on the M1 commander's cupola.

The MWO refers to Mounts M1 with serial number 1805 or under.

We've looked all over the cupola with a magnifying glass and we can't find any serial number.

What gives?

SFC J. S.



Dear SFC J. S.,

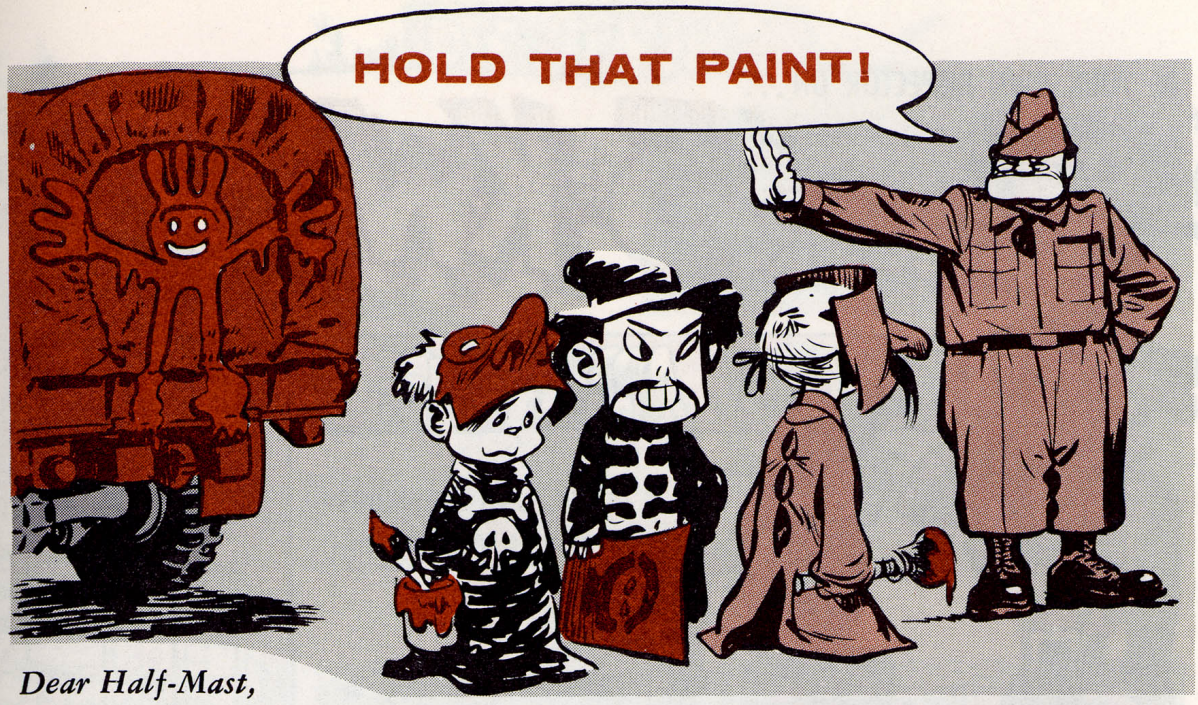
Sarge, don't ruin your eyes lookin' for serial numbers where there ain't none.

What the MWO meant was the serial number on the tank itself.

This is spelled out in Change 1 (7 Mar 60) to the MWO. The MWO calls for modification of the commander's cupola hatch lock on all M48A1 tanks regardless of serial number, and all M48A2 tanks through serial number 1805.

If your tank fits this description, send it to your Ordnance support for this Urgent modification to prevent accidental closing of the hatch during operation.

Half-Mast

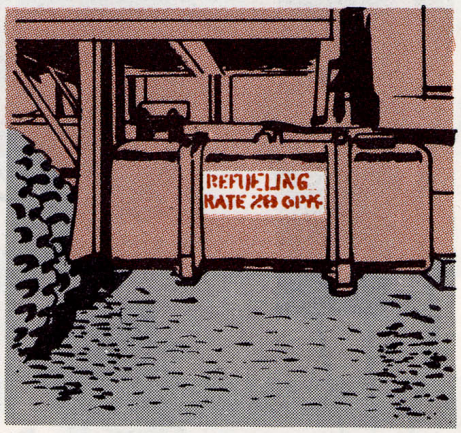


Dear Half-Mast,

All our vehicles have stencil marks showing how fast their gas tanks will drink when refueling—just like TB Ord 2300-10/1 (2 Apr 58) says.

The question is: Where do we get the dope on how to control the amount of gas the pumps're putting out? And how can we tell what the rate of flow from the pump is?

Sgt W. V. J.



Dear Sgt W. V. J.,

You can take a break, Sarge. You can discontinue marking maximum refueling rates on those vehicles, like it says in Change 1 to TB Ord 2300-10/1 (25 Sept 59).

No need to scrub the paint off it if they've been marked, though.

And there's no cause to get careless in pumping that flammable fluid now. Anybody wheeling and dealing with vehicles is wise to know their refueling rates . . . like they're laid out in the TB.

For the two gasoline pumps now most commonly used, here's some useful info:

Type III Pump, gasoline, commercial w/register, non-computing—FSN 4930-278-2024—puts out at 12-15 GPM. Recommended for vehicle gas tanks of less than 100 gallons capacity.

Type IV Pump, gasoline, commercial w/register, non-computing—FSN 4930-278-2023—puts out at 22-25 GPM. Recommended for vehicle gas tanks of more than 100 gallons capacity.

If you need more info on the pumps, see SM 10-5-4900 (7 Apr 59).

Half-Mast

BE YOUR OWN INSPECTOR ON . . .

YOUR 5-KW GENERATOR

GENERAL APPEARANCE

U. S. ARMY, UNIT MARKINGS—Missing, incorrect, not readable.

FIRE EXTINGUISHER — Missing, insufficient charge. (Judge by sound and weight.) Corrosion, insecure mounting. Defective.

I. D. PLATES, MANUFACTURER'S PLATES, INSTRUCTION PLATES—Missing, wrong info, not legible, painted over.

Makes no difference if your 5-KW generator is powering your shop equipment or keeping the lights bright in your battalion CP—give it a real vote of confidence with regular preventive maintenance.

The checks you see in this article apply to all your 5-KW generators, no matter what kind you've got. The pictures are of the Hol-Gar, Model CE 55AC/WK6. Take the same info and apply it to your own generator and you're in business.

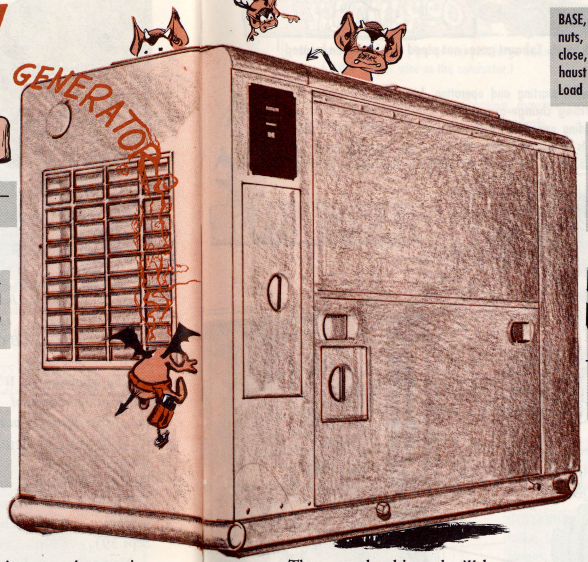
Your Hol-Gar is a self-contained, skid-mounted, canopy-covered, portable rig —completely winterized. It has a four-cylinder, gasoline engine directly coupled to the main generator to provide the power.

The generator control panel and the engine control panel, both located at the rear of the set, have all the controls and instruments you need for operating the engine, generator and heater. All of the accessories are real easy to get at by the use of access doors.

BE YOUR OWN INSPECTOR ON . . .

YOUR 5-KW GENERATOR

GENERAL APPEARANCE



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DEFICIENCIES

BASE, HOOD, PANELS—Bent, damaged. Missing nuts, bolts, screws. Access doors don't open, close, fasten. Hinges, latches defective. Exhaust port covers missing, don't open or close. Load cable port covers missing, don't open.

PUBLICATION HOLDER—Missing, worn, ripped.

TOOL BOX—Missing. Lid won't open, close or fasten. Rusty.

LEAKS—Look for sources of **grease, oil slicks on ground underneath** equipment.

These are the things that'll keep your generator from keeping its promise of trouble-free operation. All you have to do is use your eyes, ears and hands to spot them. If you can't fix them or don't have the all-clear signal to fix them—pass the word along. Your hon-cho will want to take action.

There're two kinds of deficiencies—major and minor.

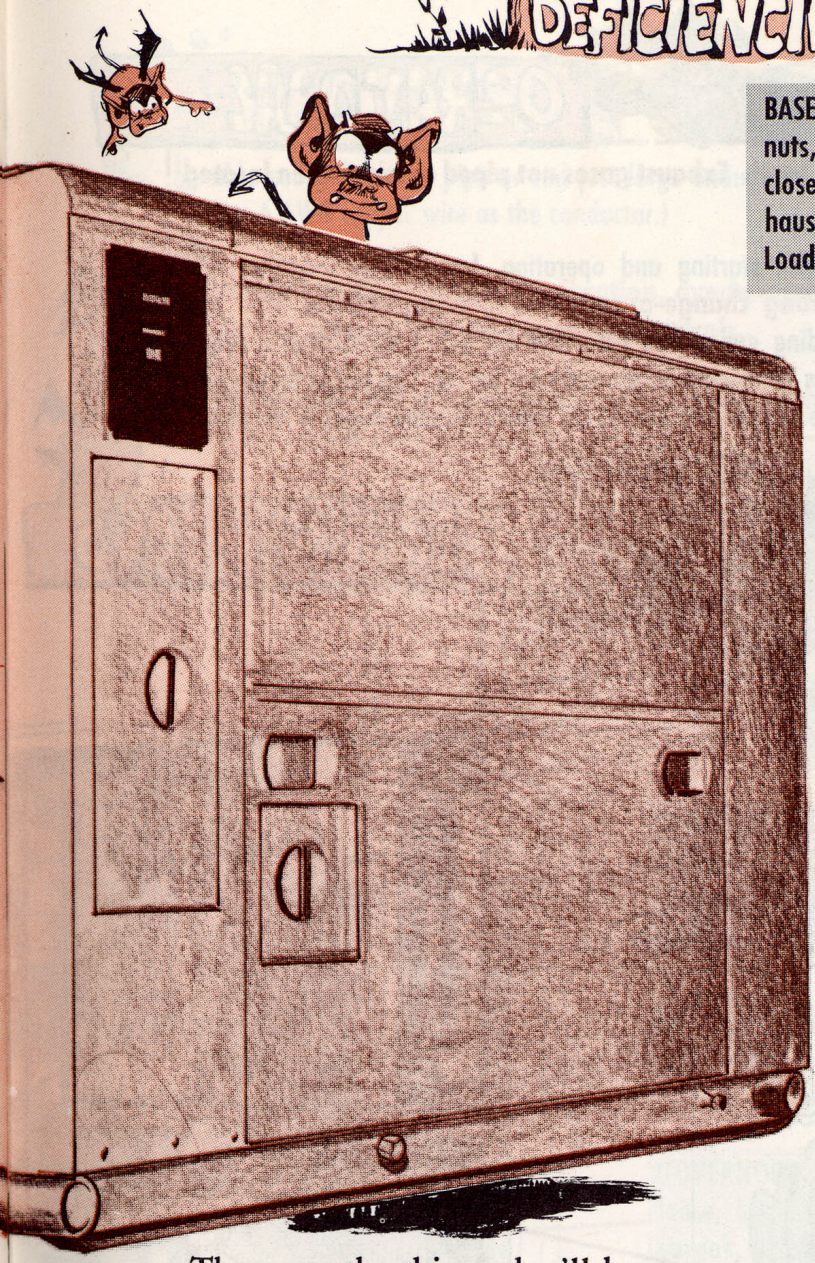
The major ones are those that can cause breakdowns, extra wear and tear, or unsafe operation. You don't want to run equipment with a major deficiency. AR 750-8 (27 Mar 58), Appendix II, gives you the lowdown on this.

A minor deficiency won't cause your equipment to stop running right off, but it can lead to a major deficiency. Some of the items listed aren't necessarily minor deficiencies, but they need attention anyway.

Be sure to check out all the details in the manual for your particular rig.

Here's what you want to look for—the major deficiencies are in **BOLD TYPE.**

DEFICIENCIES



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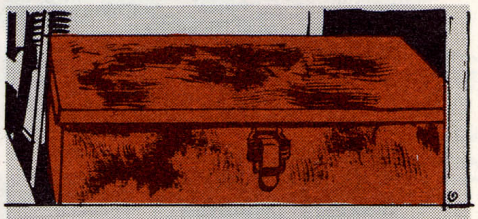

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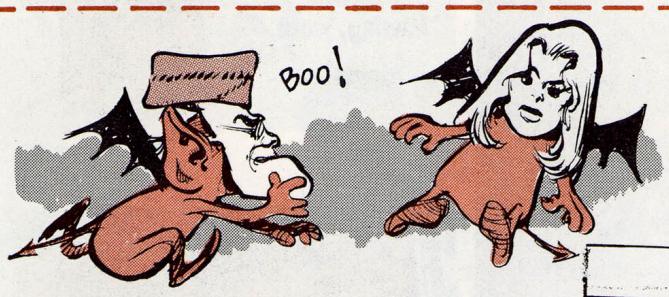
OPERATIONAL

LOCATION—**Not on firm ground, not level. Exhaust gases not piped outside when located indoors.**

STARTING—Tools, equipment in way when starting and operating. **Load lines loosely connected, not properly connected. Wrong change-over board link connections. Unit not properly grounded.** (You use grounding auger and wire (FSN 5975-371-9428) that is requisitioned as a basic issue item. Cable is connected to ground stud on rig. The rod is driven into earth at least 8 feet. Ground resistance should not exceed 25 OHMS. If issue auger is not avail-

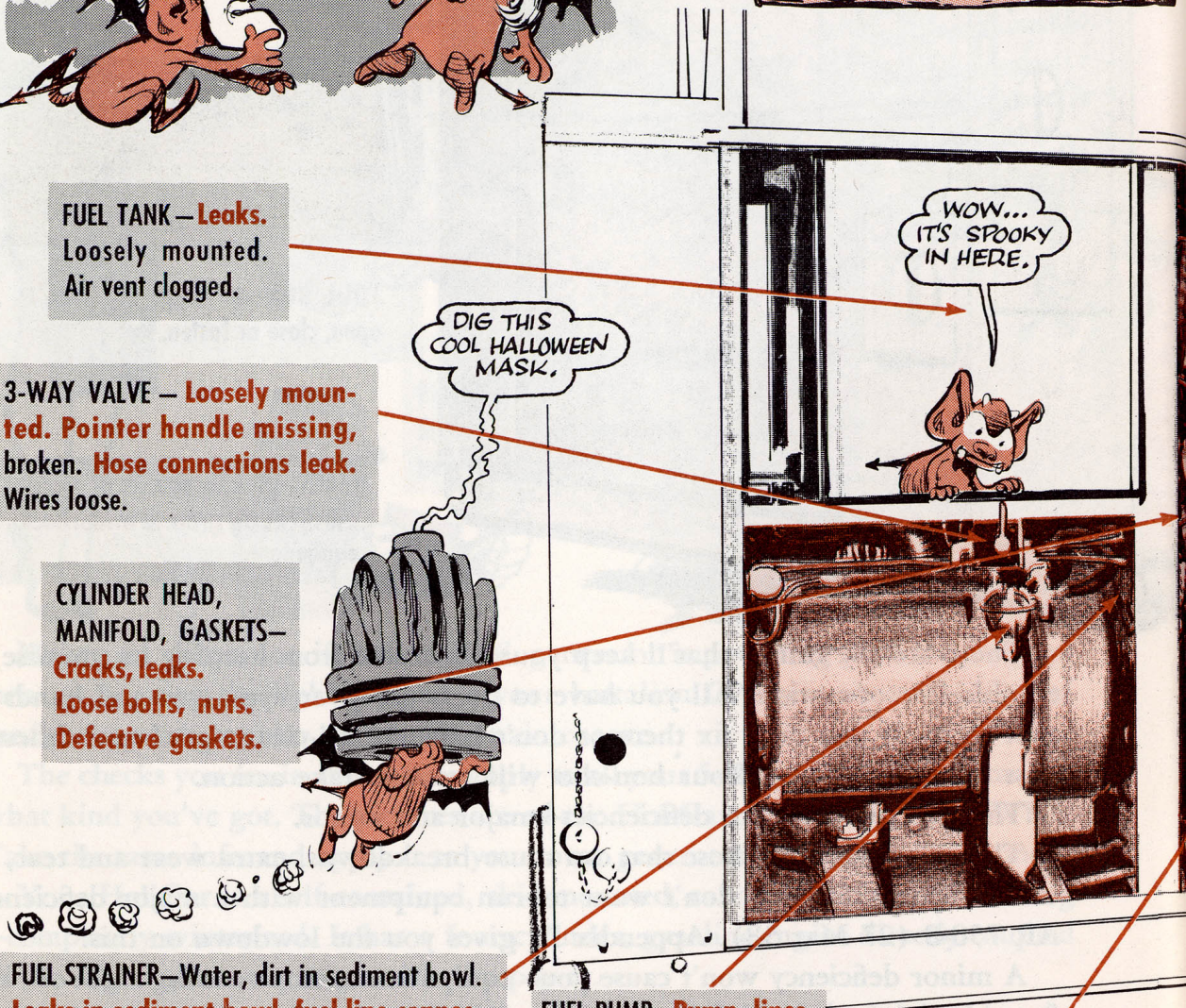


ENGINE AND

FUEL TANK—**Leaks.** Loosely mounted. Air vent clogged.

3-WAY VALVE—**Loosely mounted. Pointer handle missing,** broken. **Hose connections leak.** Wires loose.

CYLINDER HEAD, MANIFOLD, GASKETS—**Cracks, leaks. Loose bolts, nuts. Defective gaskets.**



FUEL STRAINER—Water, dirt in sediment bowl. **Leaks in sediment bowl, fuel line connections.** Screen clogged. Bowl cracked, chipped. Screen bent, mesh broken. Gasket worn, cracked. Bail bent, thumbscrew defective.

FUEL PUMP—**Pump, lines leak.** Loose mounting bolts. **Defective.**

FUEL LINES—**Leak. Loose connections. Damaged. Collapsed.**

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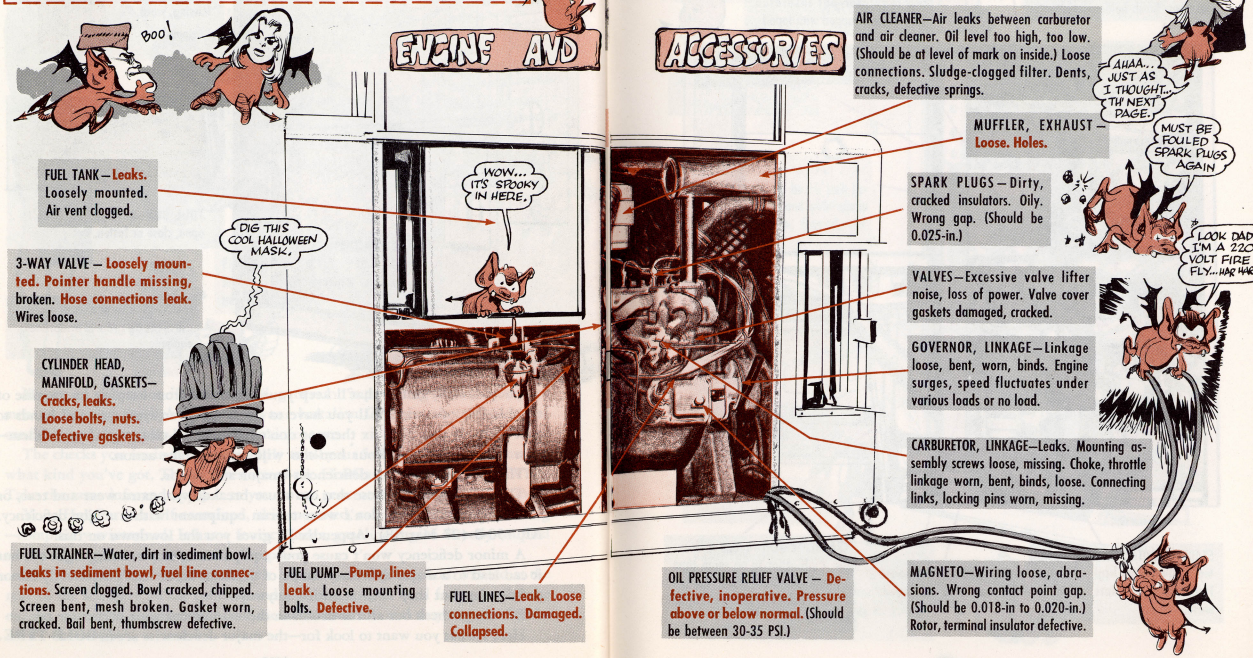
UNUSUAL NOISES—**Too much vibration, overheating, sparking at brushes. Erratic voltage output, engine fails to respond to controls.**

PROTECTION—Not properly stored. Left in open uncovered, doors open.

ENGINE AND ACCESSORIES



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OIL PRESSURE RELIEF VALVE—**Defective, inoperative. Pressure above or below normal.** (Should be between 30-35 PSI.)

AIR CLEANER—Air leaks between carburetor and air cleaner. Oil level too high, too low. (Should be at level of mark on inside.) Loose connections. Sludge-clogged filter. Dents, cracks, defective springs.

MUFFLER, EXHAUST—**Loose. Holes.**

SPARK PLUGS—Dirty, cracked insulators. Oily. Wrong gap. (Should be 0.025-in.)

VALVES—Excessive valve lifter noise, loss of power. Valve cover gaskets damaged, cracked.

GOVERNOR, LINKAGE—Linkage loose, bent, worn, binds. Engine surges, speed fluctuates under various loads or no load.

CARBURETOR, LINKAGE—Leaks. Mounting assembly screws loose, missing. Choke, throttle linkage worn, bent, binds, loose. Connecting links, locking pins worn, missing.

MAGNETO—Wiring loose, abrasions. Wrong contact point gap. (Should be 0.018-in to 0.020-in.) Rotor, terminal insulator defective.

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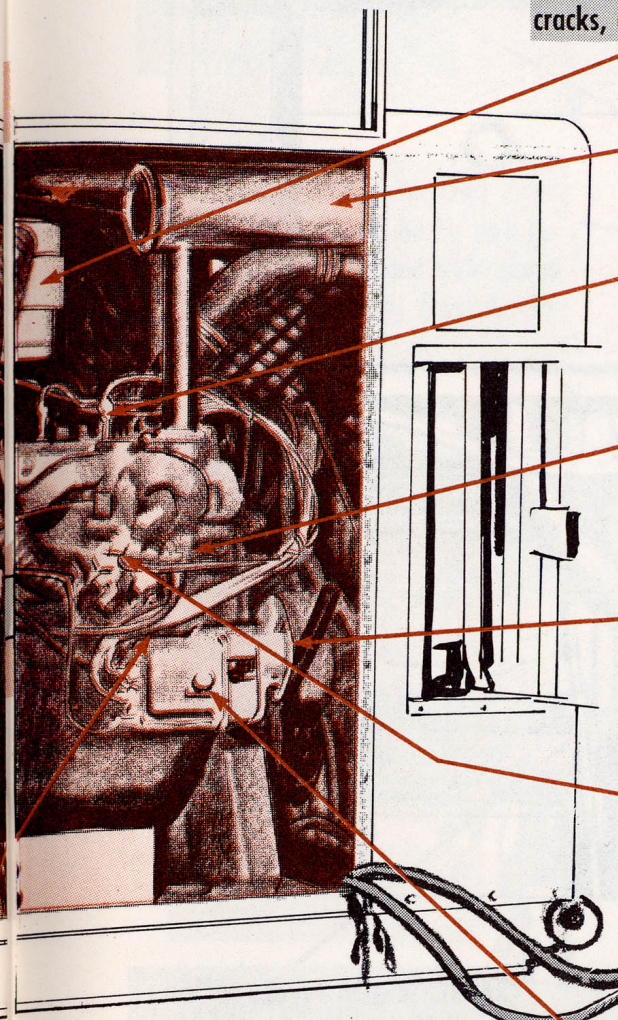

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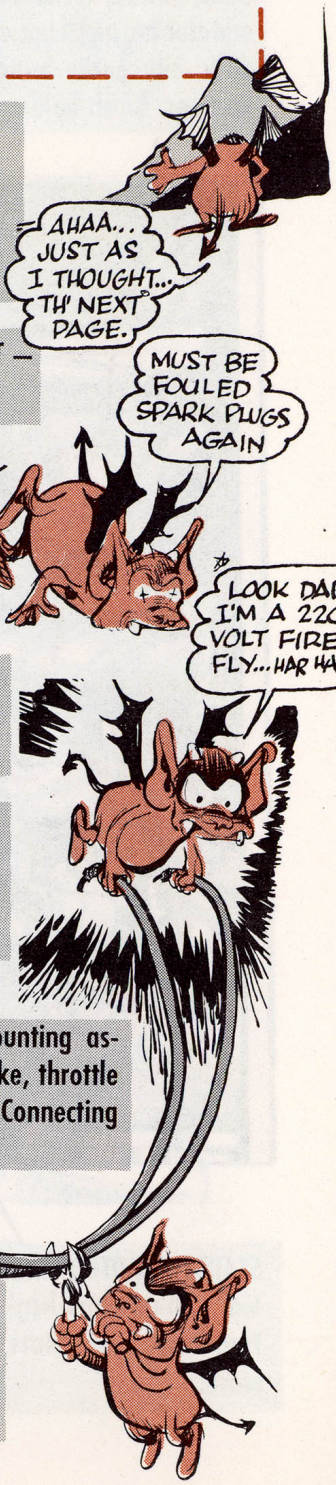
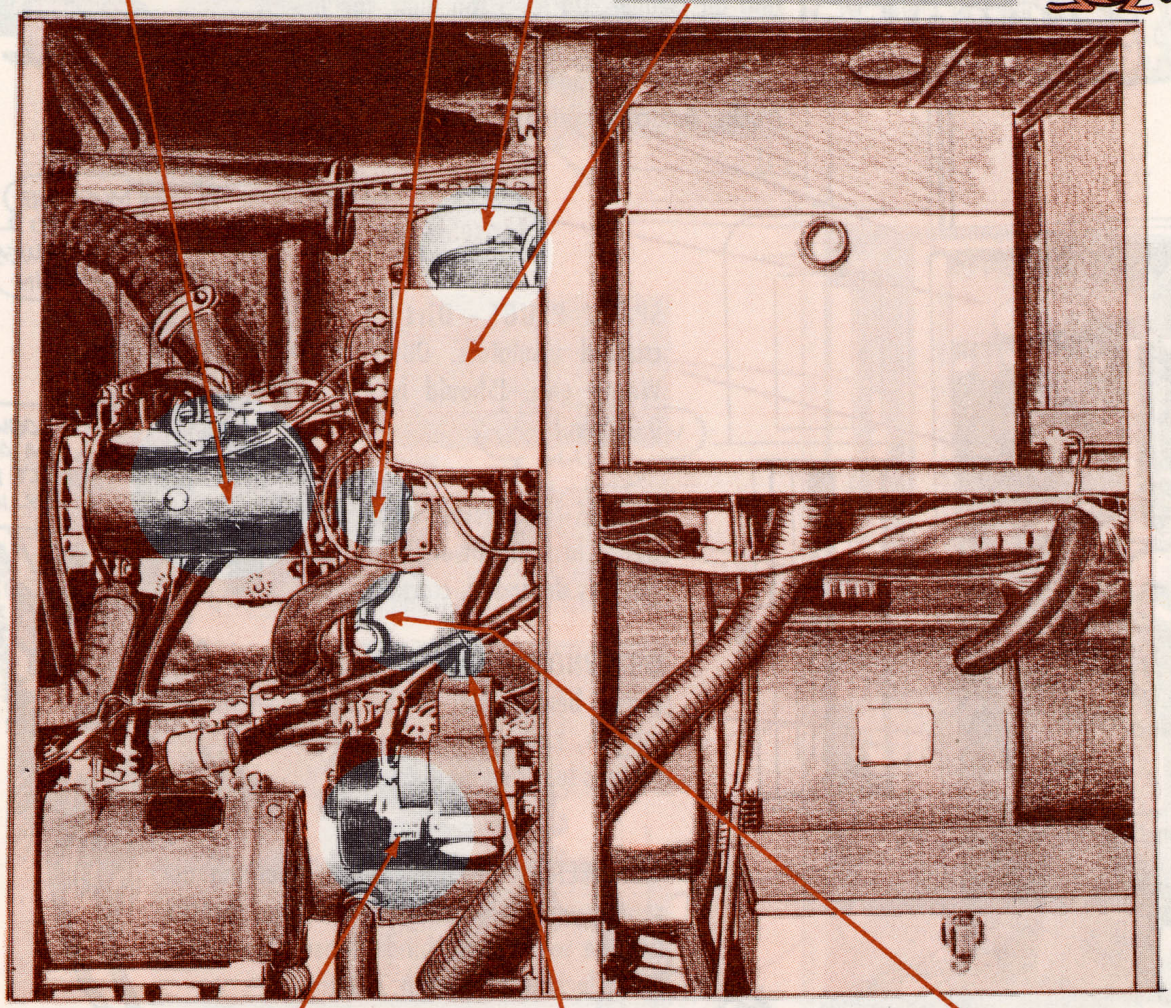


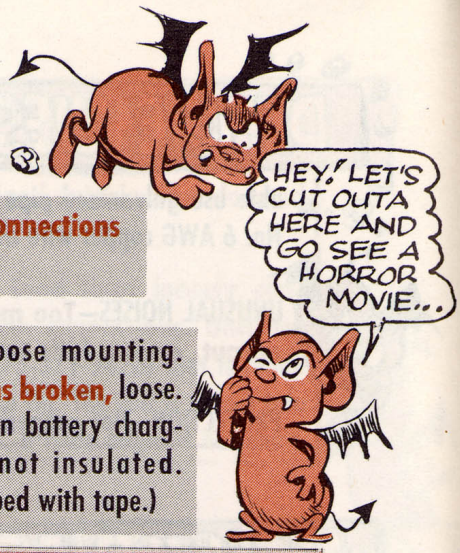


CRANKCASE BREATHER — Leaks. Dirty. Mounted loosely.

OIL FILTER — **Leaks. Connections leak,** loose. Clogged.

GENERATOR — Loose mounting bolts, wiring connections. Commutator brushes excessively worn, dirty, oily. Loose brush lead connections. Brush holder dirty.

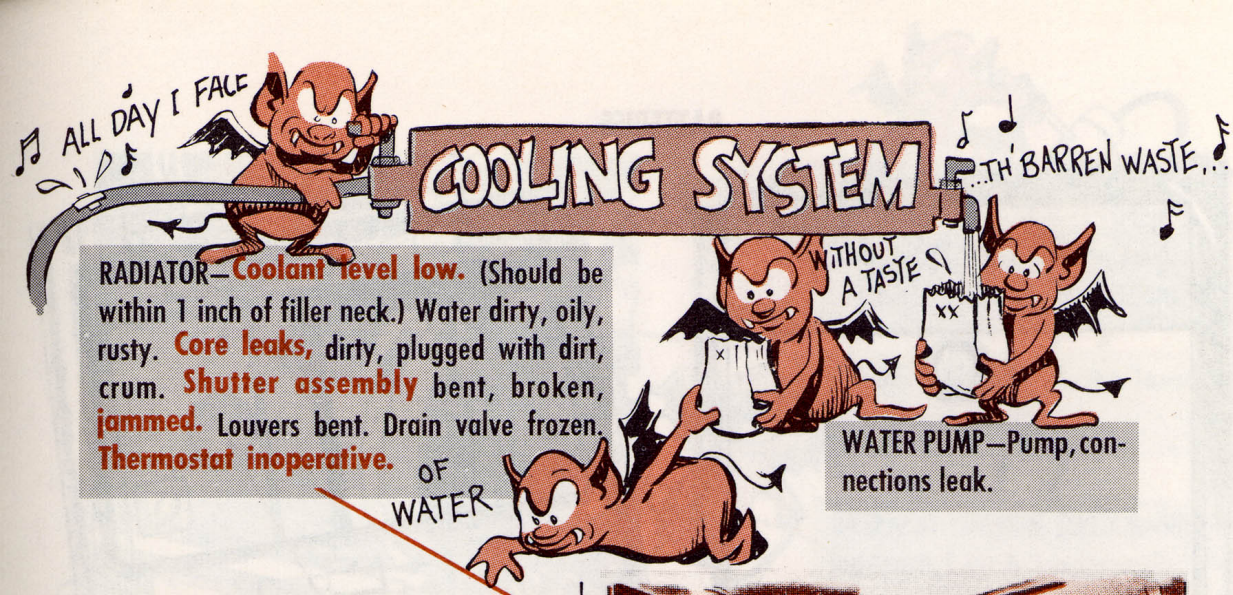
REGULATOR — Loose mounting. **Wire connections broken,** loose. Lower terminal on battery charging regulator not insulated. (Should be wrapped with tape.)



STARTING MOTOR — Loosely mounted. **Connections broken,** loose. Terminals bent. **Nuts missing,** loose.

OIL LINES — **Leak. Loose connections. Damaged.**

CRANKCASE — **Oil level too low, too high.** (Not to be more than 1/4 inch above or below the full mark.) Leaks. Bayonet gage bent, missing.



RADIATOR—**Coolant level low.** (Should be within 1 inch of filler neck.) Water dirty, oily, rusty. **Core leaks,** dirty, plugged with dirt, crum. **Shutter assembly** bent, broken, **jammed.** Louvers bent. Drain valve frozen. **Thermostat inoperative.**

WATER PUMP—Pump, connections leak.

FAN—**Blades bent, broken. Mounting bolts loose.**

FAN BELT—**Too loose, too tight.** (Deflection should be ½ inch between driven hub and water pump assembly.) Worn, frayed, cut, glazed.

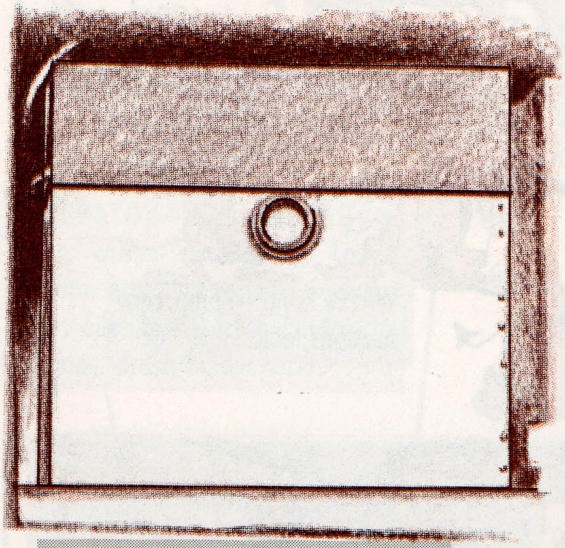
PULLEY—Out of alinement. **Broken.**

RADIATOR GUARD—Bent, **missing.**

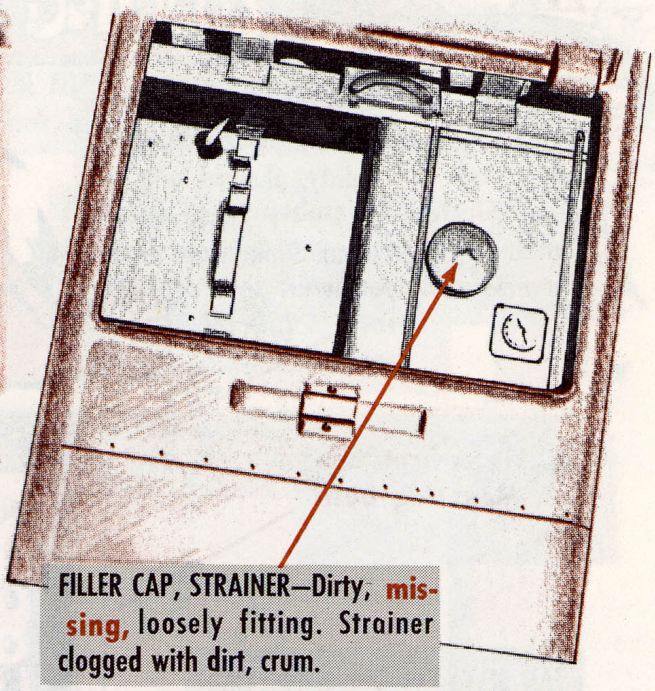
COOLANT SHUTOFF VALVES (Upper, lower)—**Stuck. Leak.** Loose connections.

ANTI-FREEZE (If required) **—Low.**

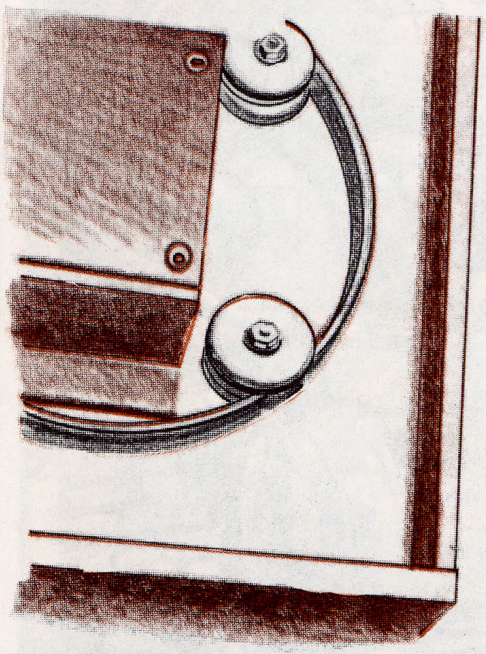
RADIATOR HOSE, CLAMPS—Hoses **worn,** spongy, **leak. Clamps missing broken. Lower hose hits fan belt.** (Hose should be inserted on outlet connection only far enough to clamp.)

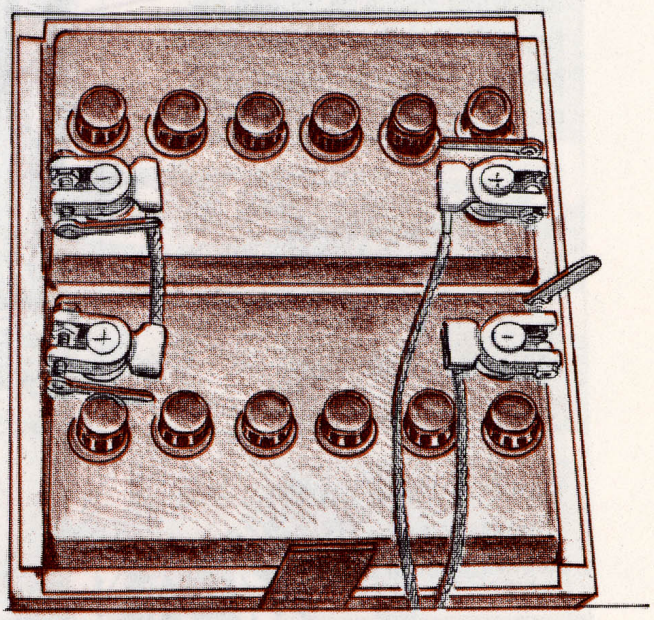


BOX— **Not mounted securely, loose.** Nuts, bolts missing, loose. Lid fits loosely. **Latch connections fail to hold lid in place.**

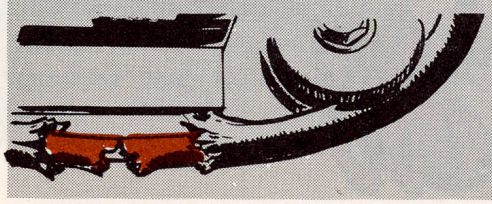


FILLER CAP, STRAINER—Dirty, **missing,** loosely fitting. Strainer clogged with dirt, crum.



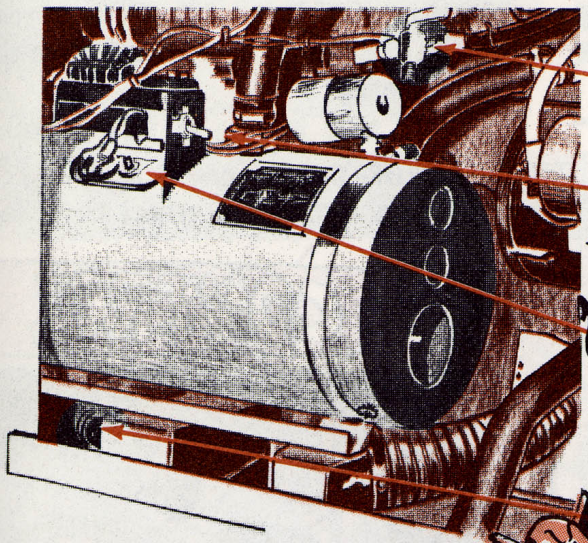


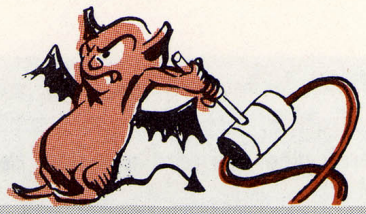
BATTERY HEATING UNIT—Damaged. **Wiring loose, broken.** frayed. Terminals damaged.



BATTERIES— **Cases cracked, leaks.** Dirt, corrosion on top of batteries. Loose cable connections. Corroded, damaged terminals, cables. **Electroylte level low.** (Should be above plates and 1/4 to 3/8 inch below bottom of filler cap.) **Filler caps missing,** loose. **Vent holes clogged. Specific gravity low.** (Should be 1.275-1.280 at 80° F.)

HEATER





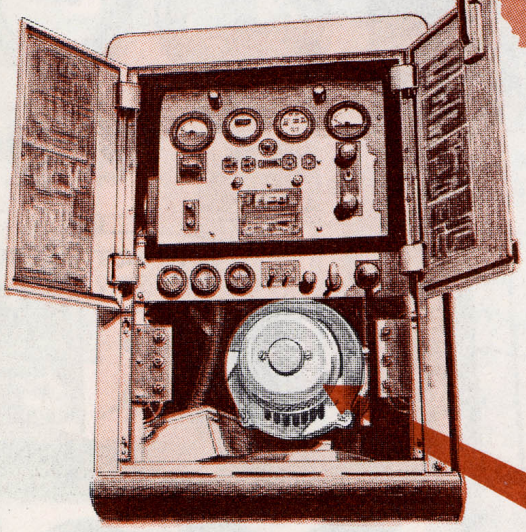
FUEL SHUTOFF VALVE — **Leaks. Loose connections.** Won't turn.

ON-OFF SWITCH—Wiring loose. **Switch inoperative.**

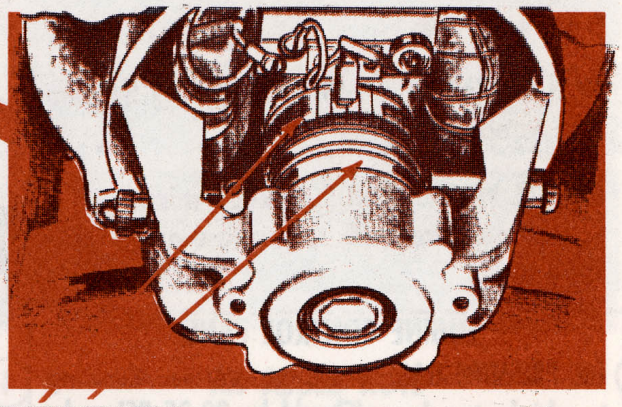
OVERHEAT CONTROL SWITCH—Wiring loose. **Switch inoperative.**

DRAIN PLUG — **Missing.** Loose Stuck.

HEATER—Loosely mounted. Dirty. Coolant, fuel lines loose, **leak.** Wire frayed. **Igniter defective, won't glow.** (Should heat to bright red in 5 seconds.)



GENERATOR



DRIVE COUPLING, VENTILATING FAN —Grease, dirt accumulated. Driving disk, fan mounted insecurely, damaged. Vibrates excessively.

ARMATURE, COMMUTATOR, ELECTRICAL CONTACT RINGS—Dust, dirt, oil, grease. **Brushes worn, loose wire connections.** (Worn more than 1/2 their original length.) **Brushes bind in holders, poor contact. Unequal, loose tension in springs. Rings worn, pitted, grooved. Exciter commutator worn, pitted, high mica between segments.** ("Brassy bright" slip rings and commutators not necessary. A uniform copper-oxide "skin" or film on rings and commutator serves as a lubricant and lets brushes operate smoothly at a low rate of wear.)

WIRING, SWITCHES — Insecure mounting. **Loose, wiring, connections. Wiring broken,** cut, abrasions, oil-soaked, frayed insulation. Conductors exposed, broken.

AMMETER—**Reading too high, too low for operation.** Depending on your operation, here's what the reading should be:

TYPE OPERATION	CORRECT READING
120-volts, 1-phase, 2-wire	52 amperes
120/240-volts, 1-phase, 3-wire	26 amperes
120-volts, 3-phase, 3-wire	30 amperes
120/208-volts, 3-phase, 4 wire	17.5 amperes

HOURMETER (TIME TOTALIZING METER)—Broken. Inaccurate. (Right hand wheel should rotate slowly when operating.)

FREQUENCY METER—**Output current high, low.** (Normal frequency reading is 60 cycles.)

PANELS—Damaged. Dirty. Thumbscrew missing, loose.

PILOT LIGHT—Missing, broken, lamp burnt out. Fails to glow when main contactor is closed.

RECEPTACLES—Tension loose, fails to hold plugs securely. **Holes plugged.**

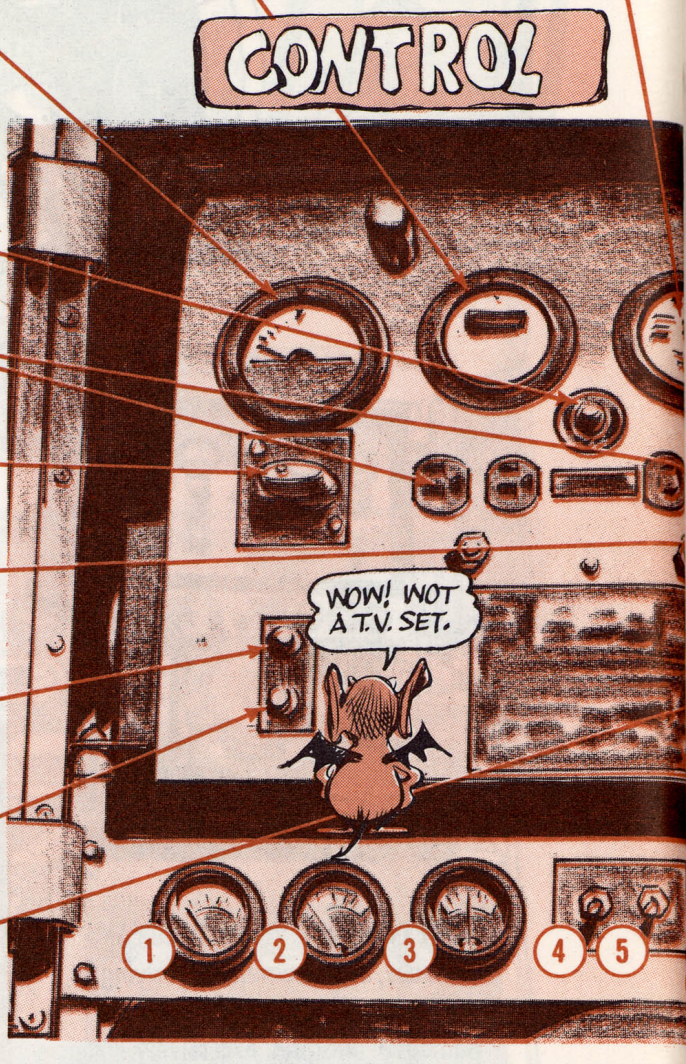
AMMETER TRANSFER SWITCH—**Knob missing,** broken. **Fails to operate.**

VOLTAGE CONTROL SELECTOR SWITCH—**Spring broken, fails to stay in one position.**

MAIN CONTACTOR ON-SWITCH—**Spring broken. Fails to operate.**

MAIN CONTACTOR OFF-SWITCH—**Spring broken. Fails to operate.**

MANUAL VOLTAGE CONTROL—**Knob missing,** broken. **Inoperative. Fails to increase or decrease voltage.**



ENGINE CONTROL PANEL

1. OIL PRESSURE GAGE—**Fails to operate. Reading too high, too low.** (Should be 30-35 PSI under normal load, 15-20 PSI when idling.)
2. WATER TEMPERATURE GAGE—**Coolant temperature reading too high, too low.** (Should read in 160-180° F range.)
3. BATTERY CHARGING AMMETER—**Fails to operate. Registers too high, too low.** (Should read from 0-20 amps in charge zone.)
4. HEATER ON-OFF EMERGENCY SWITCH—**Fails to activate solenoid valve.** Loose connections.
5. ENGINE START-RUN-STOP—**Spring broken. Engine fails to start, run, stop when pressed.**
6. CHOKE—**Knob missing,** broken. Cable loose, broken, binds. **Doesn't hold position.**
7. THROTTLE—**Does not lock, slips over notches. Cable broken,** binds.

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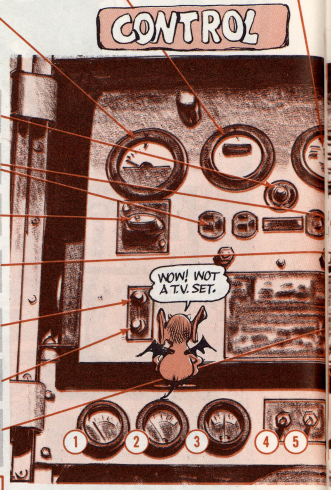
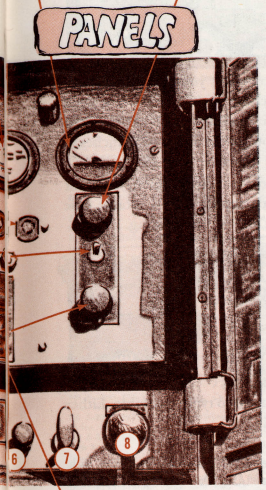
HOURMETER (TIME TOTALIZING METER)—Broken. Inaccurate. (Right hand wheel should rotate slowly when operating.)

FREQUENCY METER—Output current high, low. (Normal frequency reading is 60 cycles.)





ENGINE CONTROL PANEL

1. **OIL PRESSURE GAGE**—Fails to operate. Reading too high, too low. (Should be 30-35 PSI under normal load, 15-20 PSI when idling.)
2. **WATER TEMPERATURE GAGE**—Coolant temperature reading too high, too low. (Should read in 160-180° F range.)
3. **BATTERY CHARGING AMMETER**—Fails to operate. Registers too high, too low. (Should read from 0-20 amps in charge zone.)
4. **HEATER ON-OFF EMERGENCY SWITCH**—Fails to activate solenoid valve. Loose connections.
5. **ENGINE START-RUN-STOP**—Spring broken. Engine fails to start, run, stop when pressed.
6. **CHOKE**—Knob missing, broken. Cable loose, broken, binds. Doesn't hold position.
7. **THROTTLE**—Does not lock, slips over notches. Cable broken, binds.

VOLTMETER—Reading too high, too low. (Should read 120 volts when rig is operating.)

AUTOMATIC VOLTAGE CONTROL KNOB—Knob missing, broken. Inoperative. Fails to set voltage when turned.

TOOLS AND EQUIPMENT — Missing, unserviceable, rusty. Here's a list of what you should have:

Crank, Starting	1 ea.	(Part No. H15139 (Hol-Gar))
Hose, Assembly, Auxiliary Fuel	2 ea.	(Part No. H15159 (Hol-Gar))
Case, Operations and maintenance, Publications	1 ea.	7520-559-9618 (QM)
Screwdriver, flat tip: plastic handle; 3/16-in wide, 6-in long blade	1 ea.	5120-278-1283 (QM)
Wrench, open end, adjustable: single head, 5/16 inch jaw opening; 8 inch long	1 ea.	5120-240-5328 (QM)
Oiler, hand: 8-oz force feed	1 ea.	4930-273-3644 (ENG)
DA Operator's Manual TM 5-6115-229-10		
DA Lubrication Order LO 5-6115-229-20		
Auger, Grounding with rod and cable	1 ea.	5975-371-9428 (ENG)
Extinguisher, fire, vaporizing liquid; 1/4 gal capacity; with wall bracket	1 ea.	4210-288-8269 (ENG)

LOAD CONNECTION PLATE—Missing. Not legible, painted over.

8. **PRIMER**—Knob missing, broken. Pump inoperative.

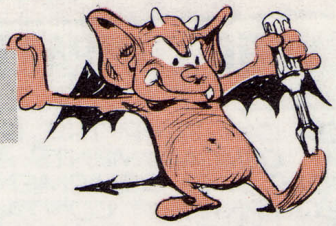
CHANGE-OVER BOARD — Loose connections. Links missing. Links connected incorrectly

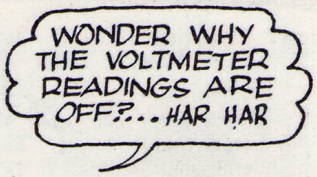
AN ADDED NOTE

The voltages, amperages, clearances, temperatures, and pressures given here apply only to the Hol-Gar Model CE 55AC/WK6 generator.

Check the TM covering your rig for the readings you ought to get on it.

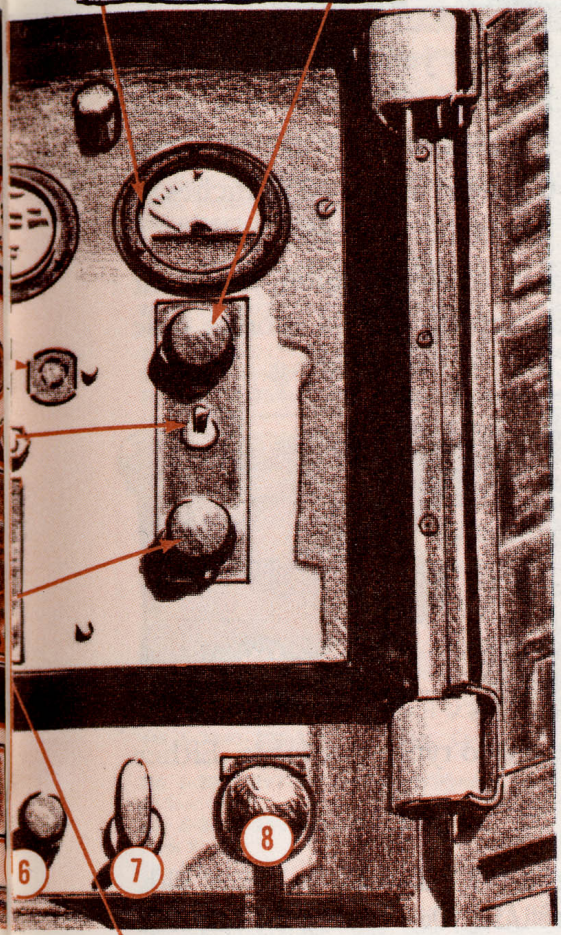
VOLTMETER—**Reading too high, too low.** (Should read 120 volts when rig is operating.)





AUTOMATIC VOLTAGE CONTROL KNOB—**Knob missing.** broken. **Inoperative. Fails to set voltage when turned.**

PANELS



LOAD CONNECTION PLATE—**Missing. Not legible, painted over.**

8 PRIMER—**Knob missing,** broken. **Pump inoperative.**

CHANGE-OVER BOARD — Loose connections. **Links missing. Links connected incorrectly**

TOOLS AND EQUIPMENT — Missing, unserviceable, rusty. Here's a list of what you should have:

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Wrench, open end, adjustable: single head, 5/16 inch jaw opening; 8 inch long	1 ea.	5120-240-5328 (QM)
Oiler, hand: 8-oz force feed	1 ea.	4930-273-3644 (ENG)
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Extinguisher, fire, vaporizing liquid; 1/4 gal capacity; with wall bracket	1 ea.	4210-288-8269 (ENG)

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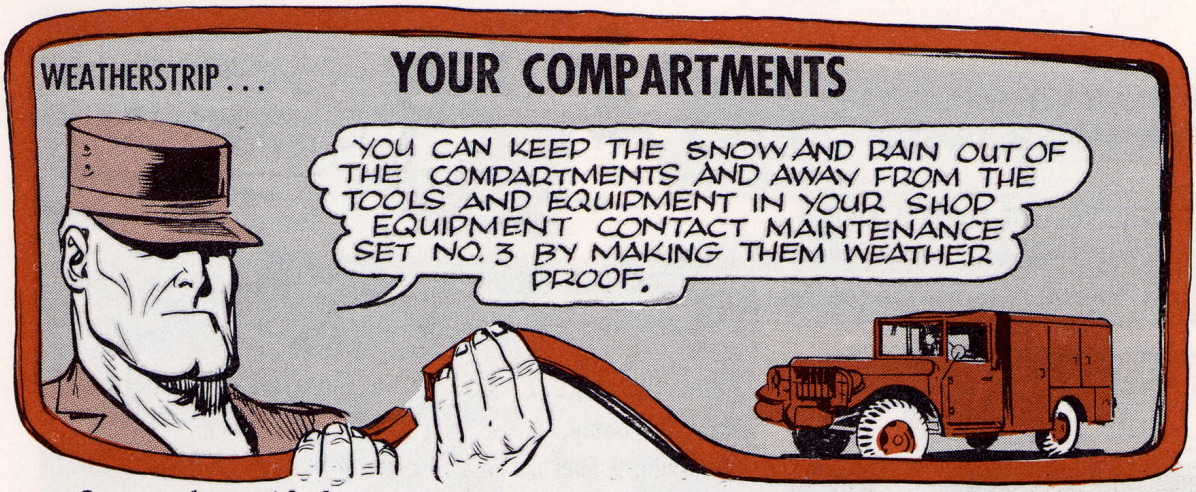
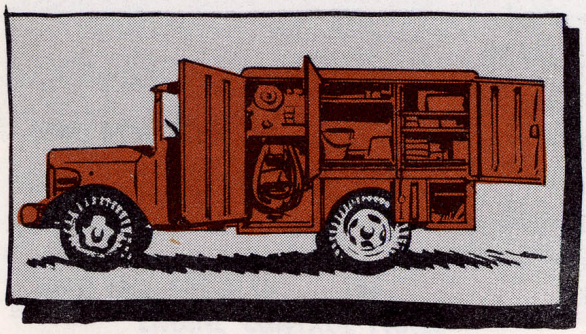


Seems that old demon weather has a way of making himself felt by sneaking in and around the doors of the compartments and playing havoc with the stuff inside—rusting tools and keeping pools of water inside.

Sure, your rig has metal weather stripping around the door hinges—and a rain guard over the compartment doors. But, somehow, someway, that moisture has a way of getting inside.

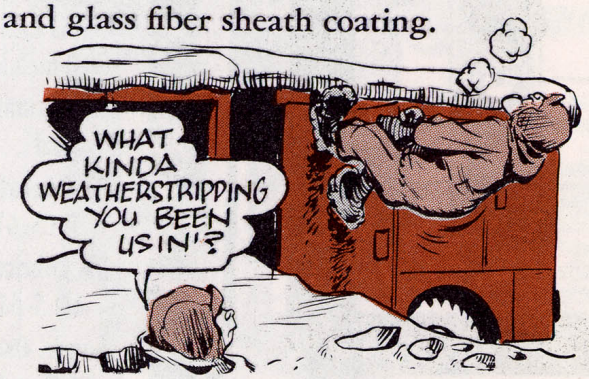
Best way to keep it out is to weatherstrip the compartments.



No sweat there. You can do the job—and your support people can supply the weatherstripping you'll need.

The stripping you want should be 3/16-in thick by 3/4-in wide. Use a good commercial adhesive to bond it to the doors. You'll need about 1034 inches to cover the doors on your set.

If you're in an arctic region, you want a weatherstripping with a sponge base and glass fiber sheath coating.



There are two types available. Either one is OK.

They are:

Type BN-112, F. B. Wright Co., Detroit, Mich.
Type SILASTIC, Dow-Corning, Midland, Mich.

If you're in a temperate zone, you'll use a good commercial weatherstripping — like that manufactured by Atlantic India Rubber Works, Inc., Chicago 7, Illinois or Rubbercraft Corp. of California, 1800 West 220th Street, Torrance, Calif.

There's no FSN for the stripping and it is not in the supply system. Your support people will have to buy it locally.

A selected list of recent publications of interest to Organizational Maintenance Personnel.

TECHNICAL MANUALS

TM 1-1H-19B-2 Apr Maint Inst.
TM 1-1H-21-4-20P Apr.
TM 1-1H-34-4 Apr.
TM 1-1H-34-4-20P May Cargo, Light.
TM 1-1H-34-6 Jun.
TM 1H-37A-4-20P May.
TM 1-1L-20A-4-20P May.
TM 3-1040-203-12 May Compressor, Recip, 7CFM.
TM 3-4230-200-20P June M3A3 Decon.
TM 5-2330-206-20P May Semitrailer, Tank 6 Ton, 1500 Gal.
TM 5-2420-208-12P May Tractor, Wheeled Industrial.
TM 5-2420-210-20P Jun Tractor, Wheeled Industrial.
TM 5-2510-201-15 May Body, Cargo Pipeline Const.
TM 5-3805-203-12P May Grader, Road.
TM 5-3805-217-12P May Ditching Machine, Parsons Mod 221.
TM 5-3810-204-12P Apr Crane Shovel, Bucyrus-Erie Mod 51-B.
TM 5-3810-209-12P May Crane-Shovel, 20 Ton.
TM 5-3810-212-12P May Crane-Shovel, Crawler ¾ Cu Yd.
TM 5-3810-215-12P Apr Crane-Shovel, Baldwin-Lima-Hamilton Mod 34-T.
TM 5-3820-200-10 May Auger Jaques Mod TJ 254.
TM 5-3895-213-12P Apr Mixer, Barber Greene Mod 840.
TM 5-3895-233-20P Jun Mixer, Concrete, 16 Cu Ft.
TM 5-3895-237-12P Jun Chart Bin, Aggregate Loading, 30 Ton.
TM 5-3910-200-12P May Elevator, Bucket Type.
TM 5-4210-204-20P Jun Trailer, Fire Fighting Pumper.
TM 5-3895-222-12P Apr Finishing Machine; Concrete Paving.
TM 5-3895-223-12P May Paving Machine Barber-Greene Mod 879-A.
TM 5-3895-225-12P Apr Paver, Concrete, Foote Mod DUOMIX 34-E.
TM 5-3895-227-12P Jun Roller 3-Wheel, 10-Ton.
TM 5-3895-228-12P Jun Subgrader, Form Riding.
TM 5-4310-205-10 May Compressor, Clark.
TM 5-6115-215-20 Jun Winpower Gen.
TM 5-6115-218-20P May Gen Set, JETA.
TM 5-6115-241-20 May Gen Set 15KW.
TM 5-6115-243-10 May Gen Set, 30KW.
TM 5-6115-253-20P May Gen Set, 2 KW, DC, 12V.
TM 5-6115-284-12P May Gen Set, AC Consol Mod 4002.
TM 9-2320-218-10 May Truck, Util ¼-Ton, M151.
TM 9-2320-218-20P May Truck ¼-Ton M151.
TM 9-2330-232-14 May Trailer, Low-Bed: 3-Ton XM114E1 & 5-Ton, XM 455.
TM 9-2330-239-14 May Trailer, 3-Ton, XM 113E1.
TM 10-4930-201-25P May Dispensing Pump, 15 GPM.
TM 11-1510-202-10P May Elect Equip L-19A, L-19E & TL-19D.
TM 11-1520-205-12P May Electronic Equip, H-21C.
TM 11-5805-261-15 Mar Terminals, TA-269/U & TA-269A/U.
TM 11-5805-271-12P Jun Terminal, Tele AN/FCC-6.
TM 11-5805-299-12P Jun Panel, Power Dis SB/1032/TTC.
TM 11-5805-301-15P Jun Cable Terminal TA-72/FT.
TM 11-5815-241-20P Jun Receiving Trans Dis TT-12/FGQ-1, TT-13/FGQ-1, Trans TT-21/FG TT-25FG.
TM 11-5820-267-20P May Power Supply PP-804/U.
TM 11-5820-271-20P May Radio Sets AN/VRC-19, 19X, 19Y, 19Z.
TM 11-5820-284-10P Apr Receiving Set, Radio AN/GRR-5.
TM 11-5820-384-12P May Amplifier-Pow Sup Gp OA-441/GR.
TM 11-5820-385-12P May Amplifier Pow Sup Gp OA-442/GR.
TM 11-5825-217-20P Jun Direction Finder Set AN/URD-4.
TM 11-5840-220-10 Apr Radar Set AN/MPQ-29.
TM 11-5840-237-12P Apr Radar Set AN/FPN-33.
TM 11-5841-209-10P May TN-178/APR-13.
TM 11-5841-212-10P May TN-180/APR-13.
TM 11-5841-215-10P May CV-124/APR-13.
TM 11-5895-235-20P Jun Power Supply PP-337/APR-9, PP-337A/APR-9, PP-337B/APR-9 and PP-337C/APR-9.
TM 11-5895-237-20P May Radio Freq Tuners TN-129B/APR-9 & TN-129D/APR-9.
TM 11-5895-236-20P May Radio Freq Tuners TN-128/APR-9.
TM 11-5895-238-20P Jun Radio Freq Tuners TN-130/APR-9, TN-130B/APR-9.
TM 11-5895-243-20P Jun Recorder RD-41B/U.
TM 11-5965-234-12P May Headset-Microphone H-92/U.
TM 11-6125-200-20 May Motor Gen PU-20/C, PU-20A/C, PU-20B/C.
TM 11-6625-253-12P May Gen TS-497/URR, etc.
TM 11-6625-334-15 May Test Set, Servo TS-1293/U.
TM 11-6625-341-20P May Test Set TS-172A/UP & Cavity, Tuned TS-172B/UP.
TM 11-6625-350-15 Apr Test Set, Radio Freq Power TS-1202/U.
TM 11-6625-356-12P May Trans Measur Set TS-559A/FT, TS-559B/FT.
TM 11-6660-204-10P Apr AN/TMQ-5, 5A, 5B.
TM 11-6665-208-15 Apr Radiac Set AN/PDR-54.

LUBRICATION ORDERS

LO 3-1040-203-12 May Compressor, Reciprocating, MIAI.
LO 5-1065-1-2 May Spreader, Concrete, 20 25 Ft Width.
LO 5-1071-1, -2, -3, May Paver.
LO 5-1090 May Rooter, Road, Letourneau.
LO 5-1161 May Water Distributor.
LO 5-1169 May Distributor, Bituminous.
LO 5-1312-2-3 May Crane-Shovel, Lima Model 34.
LO 5-2410-210-15-1-2-3 Apr Tractor w/Bulldozer.
LO 5-3805-214-15-1-2 May Loader Scoop Type: ¾ Cu Yd.
LO 5-4320-210-12 May Pump, Cent Petroleum.
LO 5-4320-212-12 May Pump Cent 2100 GPM 25 Ft Head.
LO 5-5006 May Gen, Int Fermont Mod.
LO 5-5019 May Generator, Homelite 28V.
LO 5-5314 May Generator, 100 KW, Cummins.
LO 5-5398-1 Jun Compressor, Air, 13 CFM, 3500 PSI.
LO 5-5403 May Compressor, Air, Harris 53-121 B.
LO 5-6115-243-20 Jun Generator Set, Diesel, 30 KW.
LO 5-6115-255-20 May Gen, Onan.
LO 5-9128-1, -2, -3 May Shop Mobile Set No 1 Couse Mod Med.
LO 5-9203 May Semitrailer, Low Bed, 60 Ton.
LO 5-9372 May PCV, Letourneau R. T. FTD-7, N.
LO 5-9513-1-2-3-4 May Crane-Shovel, Bay City 150M.
LO 9-2330-238-10 Apr Semitrailer: 6-Ton, M295A1 & VAN M447.
LO 5-9634-1-2-3 May Crane-Shovel, Lima 604.

MODIFICATION WORK ORDERS

MWO 5-5403-1 Jun Compressor, Air, Harris 53-121B.
MWO ORD Y26-W18 June Proper Clutch Oper Inst (N-H).

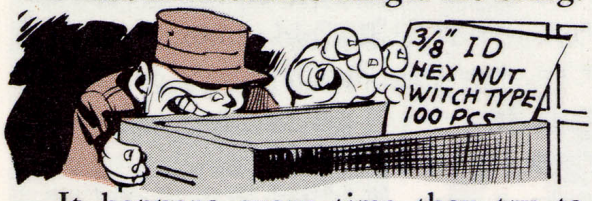
TECHNICAL BULLETINS

TB AVN 25-24 May Sensitive Altimeters: Oper Instruct.
TB AVN 25-31 Jun Aircraft Brakes.
TB QM 103 Jun Maint, Shelter Half and Mountain, Two-Man Tents.
TB QM 104 Jun Maint, Body Armor.
TB 9-1410-250-12/2/2 Jun Missile XM6E4 Safety Precautions.
TB 9-2320-206-12/2 Jun Truck: 10-Ton M125, & M123.
TB 10-278 Jun Protect Clothing, Rocket Fuel Handlers.

MISCELLANEOUS

SIG 7 & 8-AM-1842/USM May Preamplifier AM-1842/USM.
SIG 7 & 8 AN/ARN-54 Jun.
SIG 7 & 8 AN/UPM-50 Jun.
SIG 7 & 8-OA-2400/FSG-1 May Console Switching Gp OA-2400/FSG-1.
SIG 7 & 8-PP-2390/FSG-1 May Power Supply-Voltage Regulator Unit PP-2390/FSG-1.
SIG 7 & 8-PU-429/FSG-1 May PU-429/FSG-1.
SM 5-4-4210-S14 May Pumper, Class 530B; Overseas: Army Aircraft Crash.

Hate to see a grown man cry . . . and that's what some of those supply clerks handling that aircraft common hardware kit (FSN 1560-600-5617) up at the field maintenance hangar are doing.

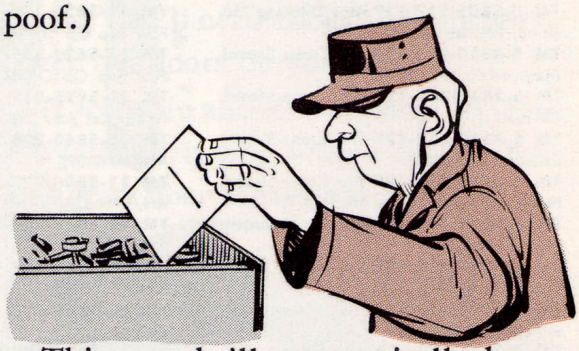


It happens every time they try to figure out when to order refills on each item. What hurts you is that if that guy doesn't keep up on his bin counts, you may not always get your fistful of nuts and bolts whenever you feel like trundling over there for small stuff. Nothing more frustrating than dipping your hand into one of those drawers and coming up with a handful of air instead of hardware.

So why not take that supply man aside next time you go over there and clue him to a little gimmick that will help him and you. Here's the way it works:

The clerk figures out a reasonable re-order level—based on past usage experience with this kit. Let's say he decides that he should re-order wiffenpoofs when his stock gets down to 60.

He then slips 60 wiffenpoofs into a separate envelope and puts the envelope back into the drawer or bin along with the loose wiffenpoofs. (And man, there's nothing looser than a wiffenpoof.)



This way he'll automatically know that when all the loose pieces in any drawer are gone, he can grab that envelope, dump the hoarded pieces into the bin, walk back to his desk and order some more. When the replacement parts arrive, he refills the envelopes.

To make it easier, your field maintenance supply man doesn't have to set different re-order quantities for each individual item. He can use a loose figure, like say 75 or 100 pieces, for a whole slew of items that are generally used up about the same rate. If usage quantities change, then it's only natural that he's gonna change the packaged up re-order level quantities.

Following this system, field maintenance should always have enough "on hand" hardware to keep you from run-

ning into an "exhausted stock" situation when it hurts the most. (Notice how they always seem to be shy on the small stuff just when the boss man is on your back about not keeping his birds in flyable condition?)

Next time you're cruising through the FM hangar, don't forget. Maybe that supply clerk's got a good system going already—and maybe he hasn't. Maybe his system's even better than this one. If it is, everybody'd like to hear about it . . . including the suggestion awards committee and ol' Half-Mast. So don't be shy when you can do a supply favor for other birdmen, too.

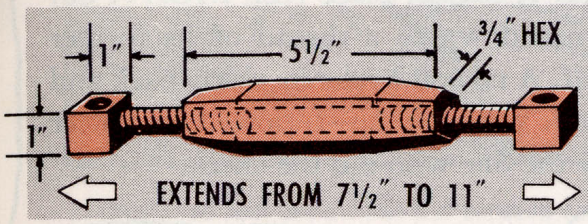
Just as added info . . . most everybody concerned remembers that SB 1-15-14 (18 Jun 58), with Change 1, covers "Distribution of Hardware Kits for Aircraft Maintenance Activities." But maybe a few helping hints on how to read the SB the right way were overlooked. So, you'd be wise to look up these TC Supply Letters.

SL 9-59 (26 Jan 59) adds to para 4 of the SB. SL 15-59 (26 Feb 59) and SL 66-59 (15 Sept 59) explain some more about para 6 in the SB. SL 18-59 (16 Mar 59) adds a tip in ordering replacements by package quantities.

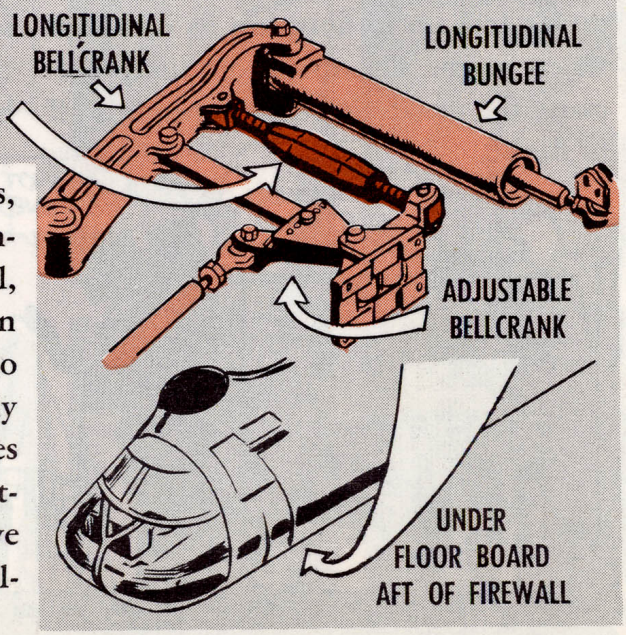
ONE MAN—NO ROPE

Any time you have a longitudinal bungee adjustment to make on your Shawnee (H-21) you're in for a good hour and a half arm-breaking nuisance of a job for a full crew of four. So if a special tool will help you do the same job by your lonesome in only 15 minutes you're interested, right? Right!

Well, here's a turnbuckle type of tool that can be attached between the adjustable and longitudinal bellcranks, parallel to the link assembly. By unscrewing the threaded part of the tool, you unload the bungee's spring tension and leave it sit that way while you go about playing with the link assembly bolts. Meanwhile, three other buddies can go about their business and the outfit can toss away that rope trick you've been using on the longitudinal bellcrank.

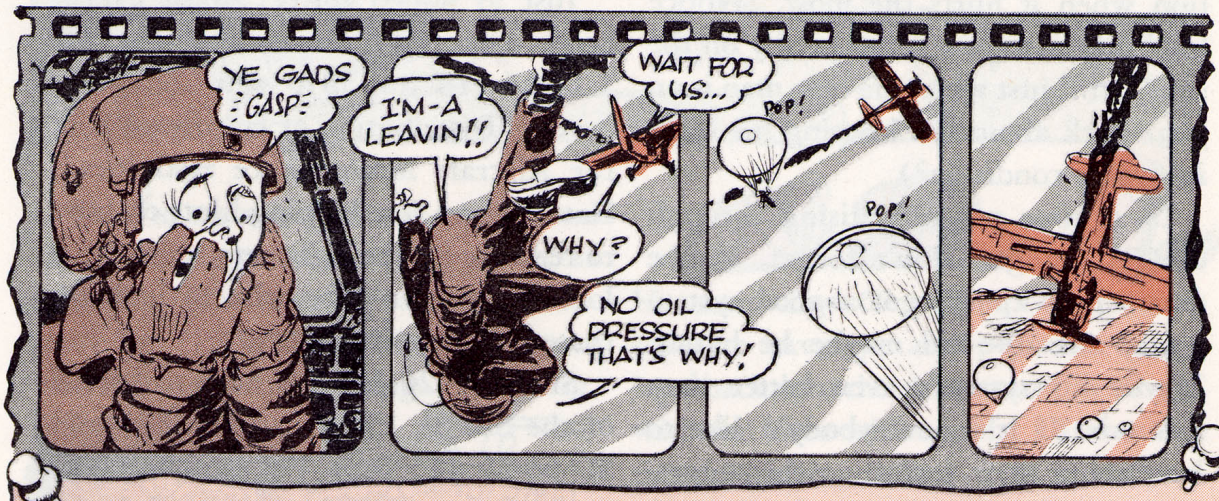


The tool should look something like this and the parts shouldn't cost more'n half a buck, all told.



THE REPORTS READ . . .

ENGINE QUIT—NO LUBE



Any aircraft mechanic will agree it's a complete waste of time doing a preflight check if you're going to forget to either tighten down an oil filler cap—or safety a sump drain plug.

It's not only a waste of time, but a sure-fire way of encouraging complete engine failure by letting the engine toss out its oil. Any self-respecting aircraft engine will sooner or later (mostly sooner) refuse to fly under this condition.

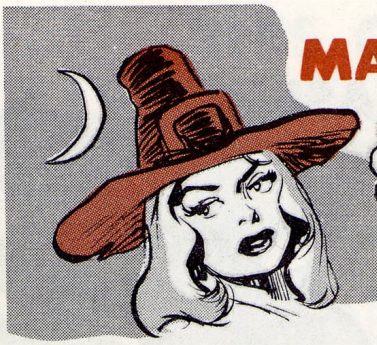
To prove the point, a Beaver (L-20A) didn't feel up to finishing its climbout when it got sick to its oil sump—because the unsafetied drain plug fell off in flight.

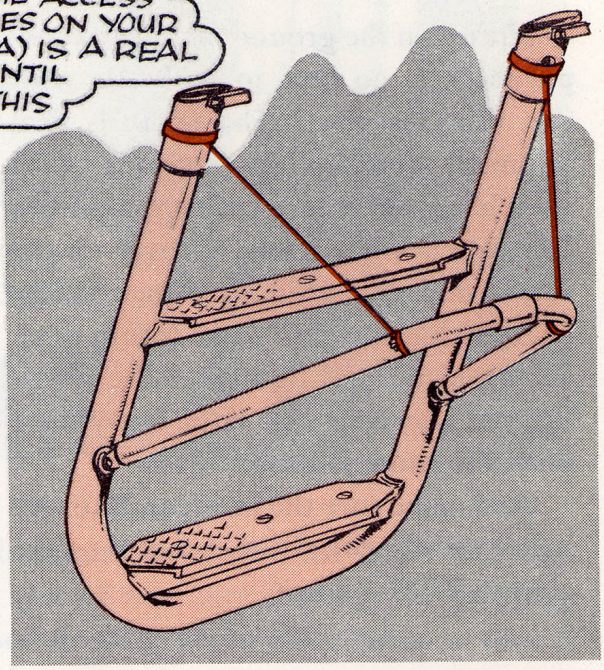
A Bird Dog (TL-19D) got the shakes and couldn't keep its manifold pressure up on an IFR cross-country flight—because somebody at the last refueling point didn't replace the oil filler cap—or else put it back without the safety pin in place.

Luckily, all the chutes did their job.

The records also tell about the aviator who remembered to check his oil filler cap, but forgot about the safety pin. It was in place ALL RIGHT, but worn down to a thread of its former self. A takeoff broke its sickly back and there went the cap—followed soon after by the one who did the check.

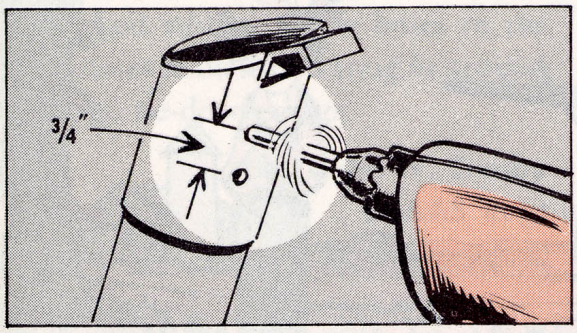
MAKE A LITTLE SLOT



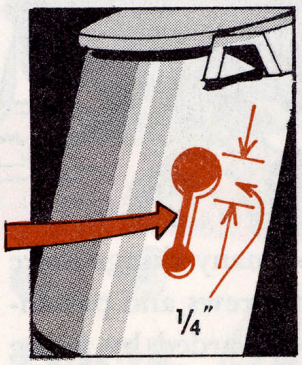


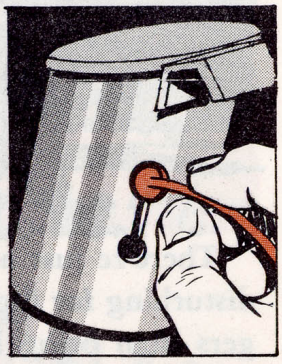
Used to be the cables were poked through the holes in the ladder's tubing and then the ball-terminals were swaged on the cable ends. But the replacements coming out of supply nowadays have the balls already attached as part of the cable assembly FSN 1680-776-0229 (P/N C3M90-9) . . . and the balls are too big to pass through the original holes.

Now the best answer to a situation like this is to make holes big enough to poke the balls through —without letting the balls pop back out again. So you drill a 1/4-in hole about 3/4-in above each 5/32-in hole already in the tube. In other words, each new hole goes between the bottom of the cabin door and the original hole with the steps in place outside the fuselage.

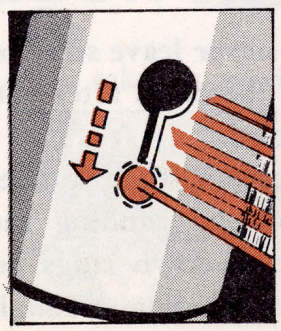


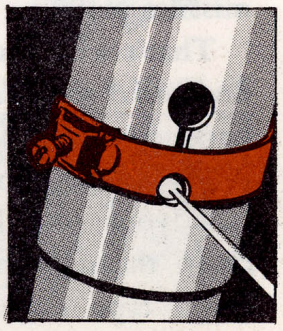
Next, you rout out a 1/16-in slot between each pair of holes. This lets you push each ball through the 1/4-in hole at the top and slide the attached cable down the slot to the smaller original hole.





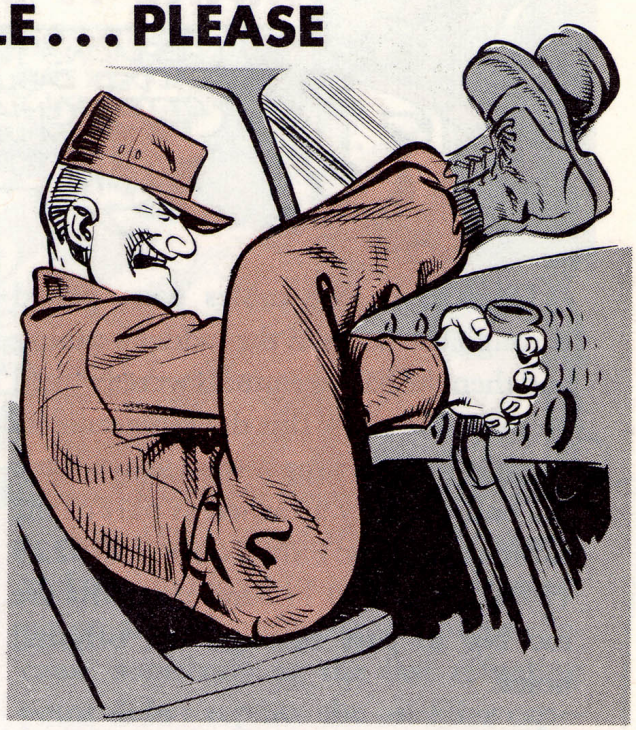
Now pick up a clamp, FSN 4730-289-5895 (P/N AN 737 RM46), and file out a 1/8-in deep notch. Then slip this clamp over each slot so the notch is sitting snugly over the ball. That way the balls will stay put and your ladder will be braced as good as ever.





STUBBORN FLIGHT CONTROLS?

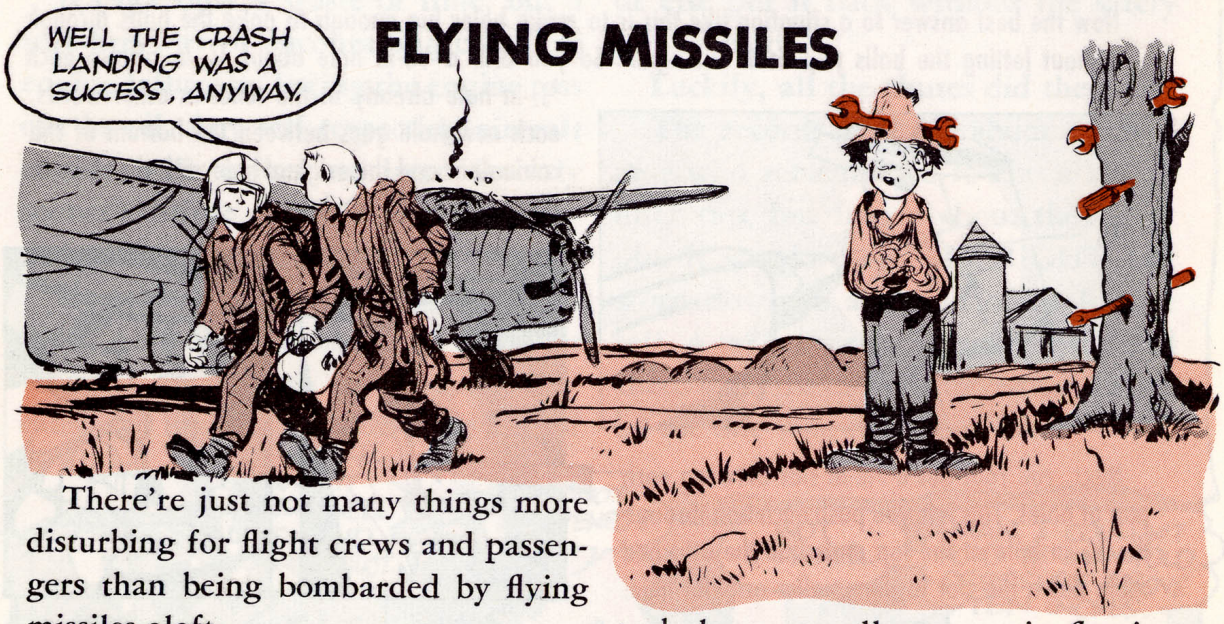
NO MUSCLE...PLEASE



Sitting on the ground making a cockpit check is no time to do battle with the beast if the flight controls feel jammed. Freeing the controls with muscle power before an inspection can be made is a good way to cover up the cause—and maybe hide a pregnant safety of flight hazard until some future time. So, when normal light pressure won't operate the controls, hold everything until the cause is found.

And make sure the incident, **like any other unsafe condition**, is noted on the aircraft's 781-2 form.

FLYING MISSILES



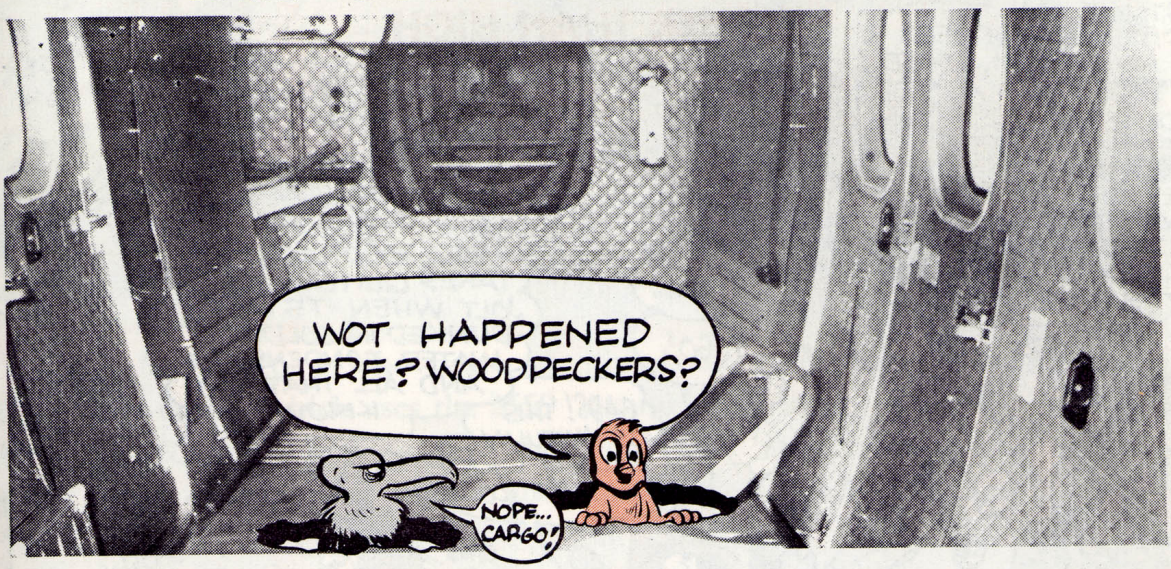
There're just not many things more disturbing for flight crews and passengers than being bombarded by flying missiles aloft.

That's why you never leave stray or unsecured tools in the cabin after you finish servicing a bird.

It's mighty important that you secure your tool box by running the chain through the tie-down rings on cargo type aircraft. Riding through turbulence usually starts it floating around, which is murder for toes and shins.

In those extreme cases when your bird decides to cut its flight short, the added G forces involved in a crash can turn those flying missiles into deadly torpedoes.

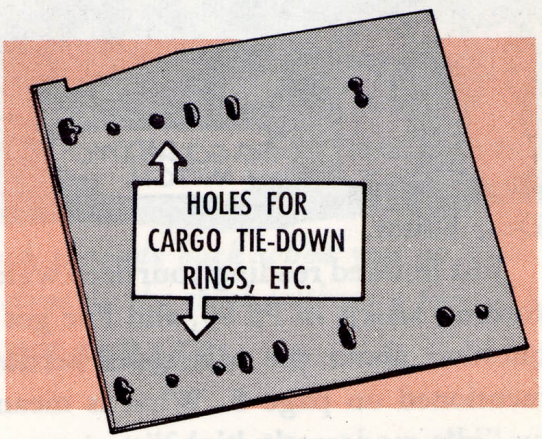
THIS OTTER GOT FLOORED



Dear Editor,

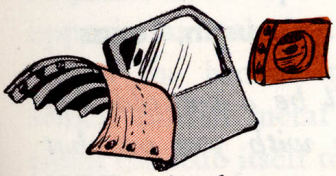
It doesn't take long to damage the aluminum flooring in the Otter's (U-1A) cargo compartment unless you use some sort of auxiliary flooring for carrying cargo. We've been using wood or plywood floors made in three parts, so they'll fit through the cargo door without trouble.

Masonite is even easier to handle for carrying lighter than gross weight loads. And adding a few holes in the right places makes for a snug fit around the cargo tie-down rings.

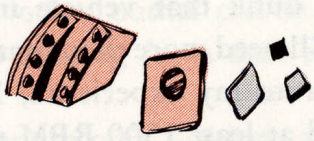


Sgt John W. Crosby
USAAS Regt
Ft. Rucker, Ala.

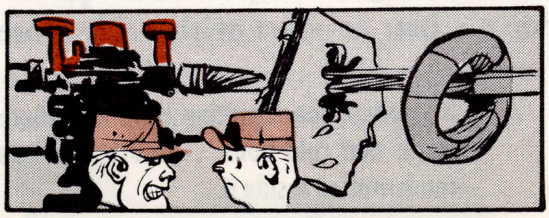
(Ed Note—Good Deal. The 1st Aviation Company at Fort Riley uses the same trick. It's a good one.)



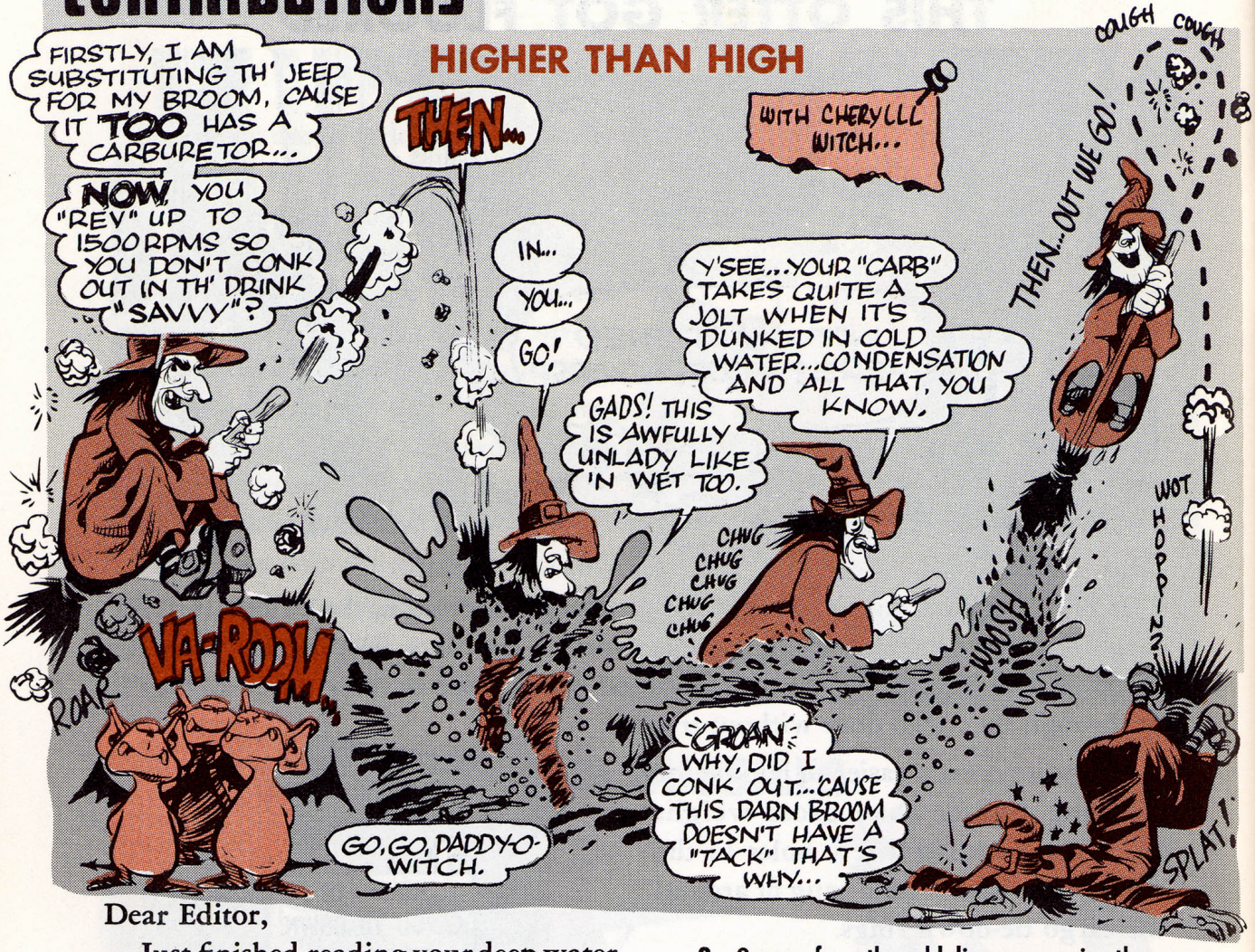
LATCH LOOK



Loose latches can lose you an aircraft. All it takes is overlooking a worn or improperly secured door or cowling latch on a pre-flight inspection. Flying doors and cowlings mixing it up with your rotor system, for example, sure makes for uncomfortable flying conditions.



CONTRIBUTIONS



Dear Editor,

Just finished reading your deep water fording article in PS 89, and I've got a question about the idle speed setting mentioned on page 8. What is meant by "idle moderately high?"

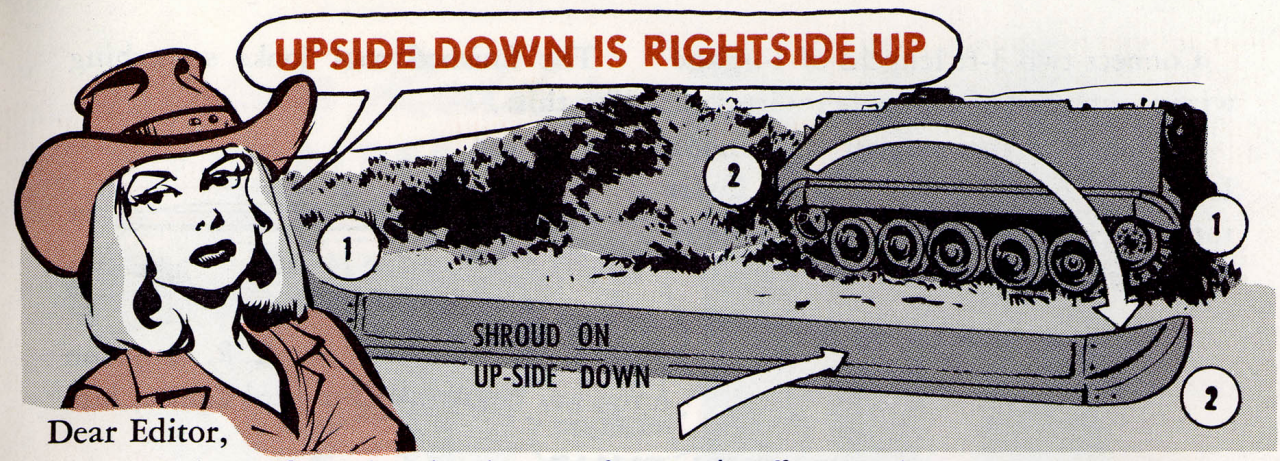
I d guess that "idle moderately high" means about 1000 RPM. But when you dunk that vehicle in cold water, you'll need more than that to get across.

From my experience, I'd say you'd need at least 1500 RPM under load to land you in good shape on the far bank. So, it's best to start with a bit more, 'cause:

1. It's quite a shock putting a warm carburetor in that cold bath . . . 'cause you'll get condensation inside it.
2. Groggy from the cold dip, your engine then gets hit with an extra heavy load pulling through and out of the water.
3. A driver may be too concerned about his own wet carcass to get the engine's SOS before it dies.

Major Ilo B. Hard
Austin, Texas

(Ed Note—It'll be a c-c-cold day when I argue with you on that point, Sir. O'course the exact RPM you need may depend on the slope you have to climb after you hit bottom. But when you're wet to your armpits or higher, better have too much than too little.)



Dear Editor,

Down here deep in the heart of Texas, our outfit—which uses the M59 APC—figured out a way to save the Army a lot of dough in supply and replacement.

We take our personnel carriers through rough country with lots of undergrowth and through woods. This gets the side guards (track shrouds) all tore up.

What we do is to take these side guards off, turn them end-for-end and mount them in an up-side-down position. That way, nothing gets caught under the shrouds and there's hardly any damage.

Of course, we know that the track shrouds are needed to help in steering when we have to ford. So as soon as we get the word to swim or we get close to water, we change the shrouds around again.

1st Recon Squad
15th Cavalry, 2nd Armor Div.
Fort Hood, Texas

(Ed Note—Sounds like a good way to save these two items from getting all chewed up. Just don't forget to put the track shrouds back when you go wading . . . otherwise you're liable to find yourselves up the creek without a paddle.)

ELECTRO-MAGNET PULLER

Dear Editor,

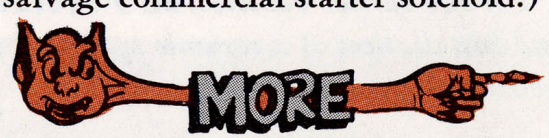
Removing a broken axle stub from our wheeled vehicles has always been a major and time consuming job. The opposite axle shaft had to be removed —then the broken stub driven out— which caused metal chips and sometimes the stub itself to fall into the gear case.

To simplify most of these jobs we came up with an electro-magnet stub puller which cut the job in half and removed all metal chips from the axle housing without much fuss and extra work.

Here's how other outfits can make one—if they're looking for a time saving tool.

Use a 3-ft length of $\frac{5}{16}$-in iron rod.

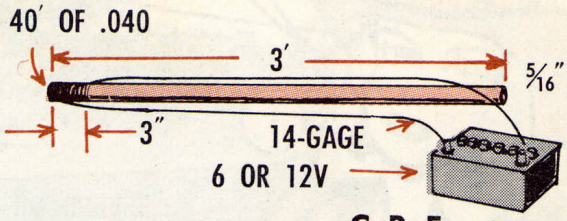
Wrap 40 feet of .040 lacquered copper wire 3-in wide on one end of the iron rod. (We got our .040 wire from a salvage commercial starter solenoid.)



Connect two 3-ft lengths of 14-gage wire at each end of the copper wire coil.

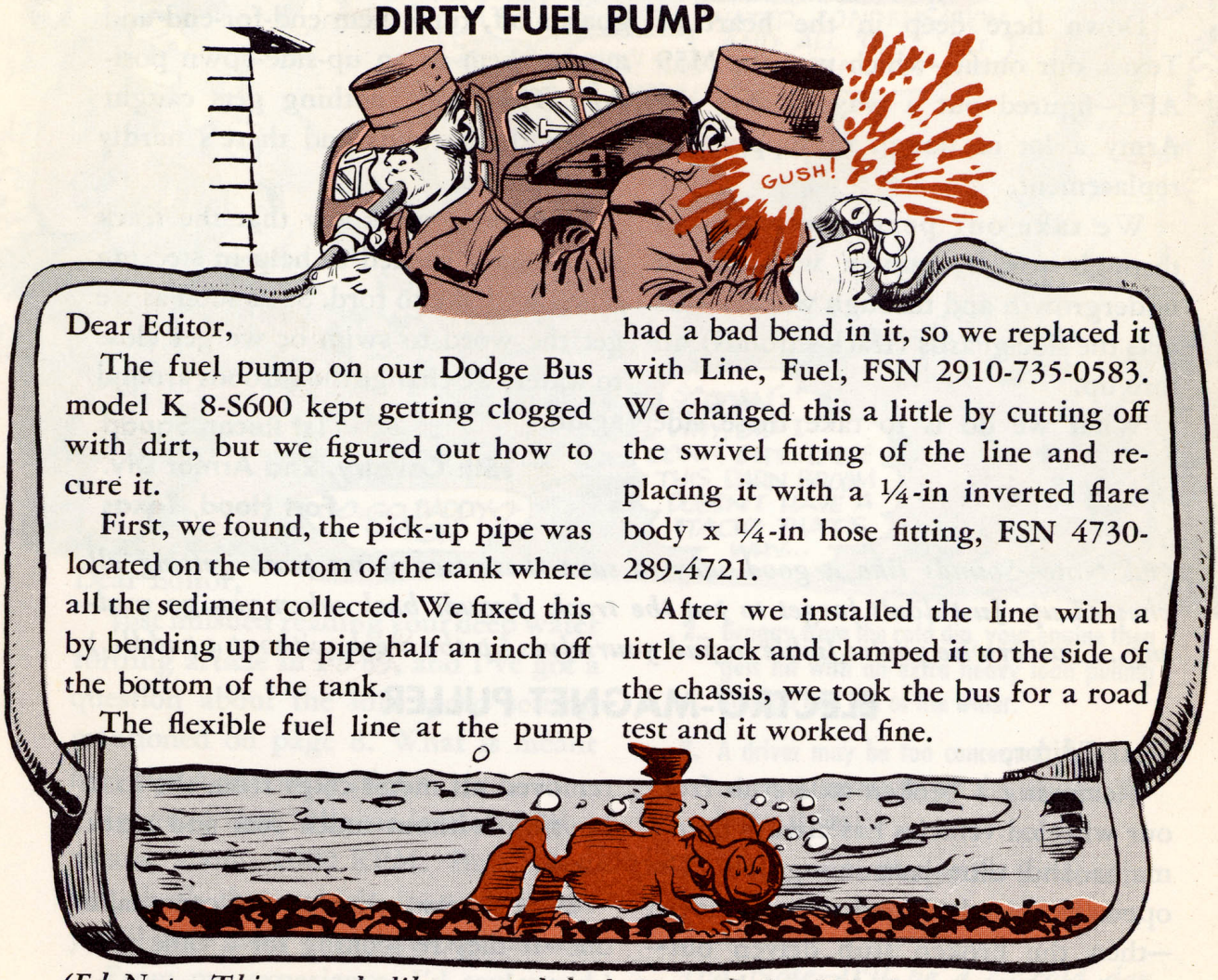
To operate the magnet tool, hook leads to a 6 or 12-volt battery, insert into axle housing and fish out all pieces of broken metal.

The finished tool looks something like this:



C. R. Ferguson
Army Chemical Center, Md.

DIRTY FUEL PUMP



Dear Editor,

The fuel pump on our Dodge Bus model K 8-S600 kept getting clogged with dirt, but we figured out how to cure it.

First, we found, the pick-up pipe was located on the bottom of the tank where all the sediment collected. We fixed this by bending up the pipe half an inch off the bottom of the tank.

The flexible fuel line at the pump had a bad bend in it, so we replaced it with Line, Fuel, FSN 2910-735-0583. We changed this a little by cutting off the swivel fitting of the line and replacing it with a ¼-in inverted flare body x ¼-in hose fitting, FSN 4730-289-4721.

After we installed the line with a little slack and clamped it to the side of the chassis, we took the bus for a road test and it worked fine.

(Ed Note: This sounds like a good deal, Sir, and should help others who have the same troubles with their early model commercial vehicles. But it's rare to find fuel pick-up lines installed at the bottom of the tank. And all commercial vehicles bought after 4 Feb 58 should have a fuel filter either in the line, fuel pump or carburetor.

For the earlier vehicles, SB 9-141 (21 Aug 56) has the dope on local purchase and installation of a ceramic type fuel filter that'll help keep the fuel pump from getting clogged.)

Connie Rodd's BRIEFS

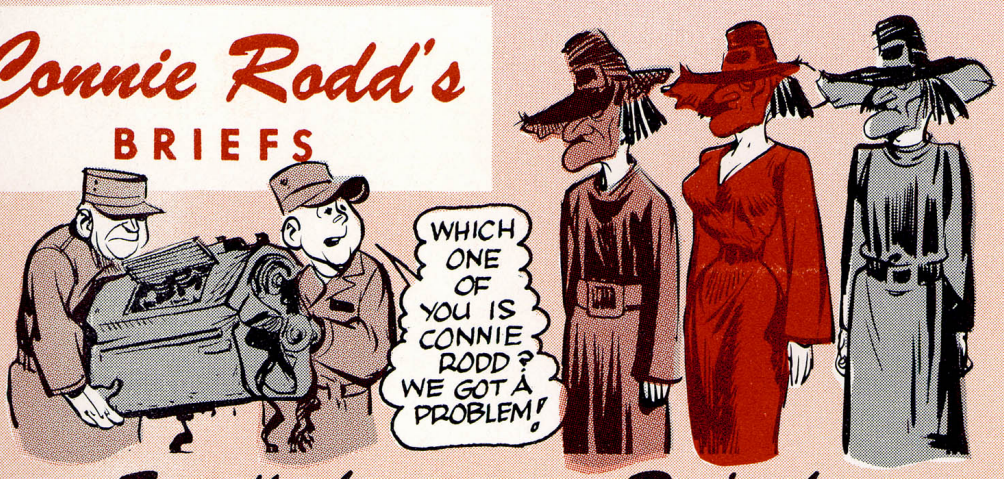


Foto flash

Heard tell about a few photographic repairmen who haven't picked up their TK-77/GF tool kits yet. The kit's designed to back the old reliable TK-24, and any man in the MOS 401 Group is authorized to put in his requisition for one. The TK-77 has needed tools for photo equipment repair which won't be included in the new tool kit replacing TK-24/GF . . . check your TOE for your authority.

Aiming circle eyeshield

You men who handle M2 aiming circles, latch onto SB 9-190 (14 Jan 60). The SB tells you about getting an eyeshield for the aiming circle—an eyeshield that knocks out annoying glares and adds eye protection. It's being issued to using units as a prescribed load item.

Where'd it go?

Maybe you've been having trouble trying to find the stock numbers in the new—20P TM's for the replacement parts in the waterproof electrical connector repair kits. They used to be listed in the 0613.4 Group in your old ORD 7 SNL's. Get hold of SM 9-4-5935-S01 (7 Aug 59). It gives the replacement parts for both the Douglas and the Bendix kits.

Don't throw away

Hey, now . . . you outfits using the OQ-19D or OQ-19B radioplanes . . . take a good look at SB 9-127 (2 Mar 59). Word's going around that a lot of outfits are tossing away excess, unserviceable, serviceable and repairable parts—instead of handling them the way it says in the SB.

Read it AR 700-38

Did that AR number on the back cover of PS Issue 94 throw you? You're right—it should read: "**AR 700-38.**" Half-Mast is going to make some knots on the noggins of a typesetter and a proofreader as soon as he catches up with them.

On the beam

A might handy piece of equipment. That's what you'd call the steel spreader beam that can be made for use on the monorail hoist when handling Nike-Hercules missile components in the warheading building.

The scoop on having one made for your outfit is in DA Cir 420-2, dated 26 Feb 60.

Would You Stake Your Life on the Condition of Your Equipment?

IF IT'S NOT GOT IT HERE
IT WON'T HAVE IT HERE
AND IT'S WHAT'S UP
FRONT THAT COUNTS